### INSTALLATION RESTORATION PROGRAM

## FINAL REMEDIAL INVESTIGATION REPORT

**VOLUME IV: APPENDICES J - O** 

ALPENA COMBAT READINESS TRAINING CENTER
ALPENA COUNTY REGIONAL AIRPORT, MICHIGAN AIR NATIONAL GUARD
ALPENA, MICHIGAN

**JUNE 1995** 



HAZARDOUS WASTE REMEDIAL ACTIONS PROGRAM
Environmental Restoration and Waste Management Programs
Oak Ridge, Tennessee 37831-7606
managed by MARTIN MARIETTA ENERGY SYSTEMS, INC.
for the U.S. DEPARTMENT OF ENERGY under contract DE-AC05-840R21400

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Remedial Investigation Report of Sites 1-9 at Alpens CRTC, Alpena MI. Volume IV Appendicies J-O. A remedial investigation was performed on 9 sites at the Alpena CRTC to determine the extent of contamination at the sites. The sites involved in this investigation include: Site 1 POL Storage Area; Site 2 Motor Pool Area; Site 3 Former Garage; Site 4 Third Fire Training Area; Site 5 Second Fire Training Area; Site 6 Former Landfill; Site 7 First Fire Training Area; Site 8 Former Hanger 9; Site 10 Hazardous Waste Storage Area. Soil and groundwater contamination above state action levels was found at the sites. An FS has been initiated.

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# REMEDIAL INVESTIGATION REPORT ALPENA COMBAT READINESS TRAINING CENTER MICHIGAN AIR NATIONAL GUARD ALPENA, MICHGIAN

#### Volume IV

#### **Appendix**

- J PARCC QA/QC Analysis
- K Laboratory Data Validation
- L Analytical Results; Site 5 Soils Data (Collected 1991 and 1993) and RI Laboratory Data
- M Facility-wide Soil and Groundwater Background Determination Data
- N Analytical Results; Round 3 Groundwater and Background Soil Sampling Fixed Base Laboratory Data Summary
- O Analytical Results; SI Fixed Base Laboratory Data Summary

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Appendix J: PARCC QA/QC Analysis

APPENDIX J

**JENT** 

#### J.1 Introduction

A standardized QA/QC program was followed during the RI at the Alpena CRTC to ensure that analytical results accurately represent the environmental conditions at the sites. The RI was conducted using the HAZWRAP Level C (i.e., U.S. EPA Level III) QC requirements described in Requirements For Quality Control Of Analytical Data (DOE/HWP-65/R1, July 1990) and the guidelines and specifications described in the RI Work Plan.

The numbers of soil samples collected and selected laboratory QC (i.e., matrix spikes and duplicates) samples analyzed are summarized in Table J-1. The QC checks and results are summarized below.

#### J.1.1 Data Quality Objectives

Data Quality Objectives are qualitative and quantitative statements developed by data users to specify the quality of data obtained form field and laboratory data collection activities to support specific decisions or regulatory actions. DQOs also establish numeric limits for the data to allow the data user to determine if the data collected are of sufficient quality for use in their intended application. The data collected during the RI field effort will be used to develop a risk evaluation and recommendations for (1) developing and implementing an immediate response plan if required, (2) taking no further action and preparing a Decision Document, (3) initiating focused feasibility study and remedial measure, or (4) proceeding with the feasibility study. The following sections summarize the DQOs for PARCC obtained during the RI.

#### J.1.1.1 Precision

Precision refers to the level of agreement among repeated measurements of the same characteristic, under a given set of conditions. Precision is expressed quantitatively as the measure of the variability of a group of measurements compared to their average value. Precision was defined as the reproducibility, or degree of agreement, among replicate measurements of the same quantity. For this project, the precision of the analytical and instrument measurement system was assessed through the collection and analysis of field duplicate samples and the performance of analytical replicates. The closer the numerical values of the measurements are to each other, the more precise the measurement. Analytical precision was expressed as the percentage of the difference between results of duplicate samples for a given compound or element. Relative percent difference (RPD) was calculated as:

$$RPD = \frac{Abs(C_1 - C_2)}{\frac{C_1 + C_2}{2}} \times 100$$

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Table J-1 Summary of Analytical Program MIANG, Alpena CRTC, Alpena, Michigan

Sample Source	VOC SW5030/8010 & 80201	SVOC CLP 3/90 (10/92) <sup>2</sup>	Priority Pollutant Metals SW-846	Hexavalent Chromium SW-846-7196 A	TPH 418.1
Soil	72	72	72	69	72
Sediment	37	37	37	9	37
Water	75	75	75	0	75
Total	184	184	184	78	184
Field Duplicates	9 <sub>soil</sub> 5 <sub>Sed</sub> 7 <sub>Water</sub>	9 5 7	9 5 7	9 5 0	9 1 7
Trip Blanks	27				
Equipment Rinseates	19	20	19	0	19
Field Blanks	7	7	7	00	7

NOTES: 1. Second column confirmation was performed for those samples containing compounds greater than detection levels.

2. Groundwater samples analyzed under CLP 10/92 statement of work for low concentration water.

3. Filtered and unfiltered water samples were collected

#### Where:

C<sub>1</sub> = Concentration of the compound or element in the sample

 $C_2$  = Concentration of the compound or element in the duplicate/replicate.

Precision was determined using MS/MSD and duplicate sample analyses conducted on samples collected for VOC, SVOC, PPM, and TPH analysis during the Alpena CRTC RI. The laboratory selected 1 sample in 20 and split the sample into 2 additional aliquots. MS/MSD samples were prepared by routinely screening the first aliquot for the parameters of interest before analysis, while the remaining two aliquots were spiked with known quantities of parameters of interest before analysis. The RPD between the spike results was calculated and used as an indication of the analytical precision for the VOC, SVOC, and TPH analyses performed. Duplicate samples for PPM analyses were prepared by subdividing 1 sample of every 20 samples received and analyzing both samples of the duplicate pair. The RPD between the two detected concentrations was calculated and used as an indication of the analytical precision for the analyses performed. The objectives for precision are to have 90 percent of the values calculated within the specified RPD range of 20 percent.

Ten of 416 RPD water and 20 of 329 soil values calculated from the VOC analyses exceeded control limits of 20% for analytical precision. Control limits for VOC matrix spike and matrix spike duplicates are detailed in Table J-2 and J-3. Seventeen of 77 soil RPD values calculated from the SVOC analyses exceeded control limits of ±20% for analytical precision. Control limits for SVOC MS/MSD are detailed in Table J-4 and J-5. The 10/92 CLP SVOC SOW for low level waters does not require a MS/MSD and therefore no values are presented in Table J-2. Seventeen of 95 RPD soil and 14 of 143 RPD water values calculated from the PPM analyses were outside advisory control limits of ±20%. Zero of 6 RPD soil values calculated from hexavalent chromium were outside advisory control limits of ±20%. Control limits for metals MS/MSD are detailed in Table J-6 and J-7. One of 25 RPD values calculated from the TPH analyses exceeded control limits of ±20% for analytical precision. Control limits for TPH MS/MSD are detailed in Table J-8.

The majority of the RPD values which exceeded control limits for metals were close to the instrument detection limit where larger percent differences are expected. These results for soil are considered to have little impact on the environmental data quality and considered more likely to be the result of the regional matrix variability that could not be overcome by the sample mixing prior to the analysis of the samples. Water RPD values which exceeded control limits are most likely due to the unequal distribution of suspended minute particulates that could not be evenly distributed by well development procedures and mixing procedures since the analytical QC results do not indicate a systemic laboratory problem. Based on an overall 94% of the RPD results meeting control limits and the acceptable laboratory QC results, the sample collection DQO for precision has been met. No corrective action was taken based on RPD values. A complete discussion of all replicate samples is presented in section J.2.4.

#### J.1.1.2 Accuracy

Accuracy was defined as the degree of difference between measured or calculated values and the true value. The closer the numerical value of the measurement approaches the true value, or actual concentration, the more accurate the measurement. Analytical accuracy is expressed as the percent recovery of a compound or element that has been added to the environmental sample at a known concentration before analysis. Analytical accuracy was determined using MS/MSD and surrogate recovery data. The following equation was used to calculate percent recovery:

$$\%R = \frac{A_r - A_0}{A_t} \times 100$$

Where:

A<sub>r</sub> = Total compound or element concentration detected in the spiked sample

A<sub>o</sub> = Concentration of the compound or element detected in the unspiked sample

A<sub>f</sub> = Concentration of the compound or element added to the sample

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Table J-2 Laboratory Quality Control Summary: MS/MSD Volatile Orginic Compounds Water Samples MIANG, Alpena CRTC, Alpena, Michigan

		Accuracy					Precision			
	Total No. Analyses	Percent Recovery Ranges	Percent Recovery Limits	Number Within Control Limits	Number Outside Control Limits	MSD Total No. Analyses	Range RPD	RPD Limits	Number Within Limits	Number Outside Limits
8010										
Bromodichloromethane	18	89-110	42-172	18	0	<b>o</b>	4-6	20	6	<b>o</b>
Bromobenzene	48	91-100	06-09	18	0	6	2-5	2	o	0
Bromoform	8	100-111	13-159	18	0	6	9-23	2	æ	0
Bromomethane	18	88-119	1-144	18	0	6	17-18	29	တ	0
Bromochloromethane	18	91-99	4-133	18	0	6	4	20	တ	0
Carbon tetrachloride	18	102-113	43-143	18	0	6	3-11	29	<b>o</b>	0
2-Chloroethlyvinyl ether	18	0-125	14-186	4	4	თ	5-100	23	S.	4
Chlorobenzene	18	100-116	38-150	4	0	<b>6</b>	15-20	20	o	0
Chloroethane	18	100-119	46-137	18	0	<b>о</b>	5-13	20	o	0
Chloroform	18	99-104	49-133	18	0	<b>o</b>	4-7	20	6	•
Chloromethane	18	81-119	1-193	18	0	<b>o</b>	5-15	20	o	0
2-Chlorotoluene	18	72-93	60-140	18	0	6	4-11	20	6	0
4-Chlorotoluene	\$2	74-91	60-140	18	0	6	3-6	2	6	0
1,2-Dibromoethane	\$	70-97	24-191	18	0	6	2-5	20	<b>o</b>	0
Dibromochloromethane	8	65-118	24-191	18	0	6	5-9	2	6	0
1,2-Dichlorobenzene	48	75-102	1-208	48	0	თ	7-45	70	7	2
1,3-Dichlorobenzene	\$	83-102	7-187	18	0	<b>o</b>	7-17	70	<b>o</b>	0
1,4-Dichlorobenzene	18	84-109	42-143	18	0	6	7-22	70	7	2
1,1-Dichloroethane	18	104-106	47-132	18	0	6	2-7	20	6	0

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Table J-2 Laboratory Quality Control Summary: MS/MSD Volatile Orginic Compounds Water Samples MIANG, Alpena CRTC, Alpena, Michigan

		Accuracy					Precision			
	Total No. Analyses	Percent Recovery Ranges	Percent Recovery Limits	Number Within Control Limits	Number Outside Control Limits	MSD Total No. Analyses	Range RPD	RPD Limits	Number Within Limits	Number Outside Limits
8010										
1 2-Dichloroethane	- 48	101-108	51-147	81	0	<b>o</b>	2-12	20	6	<b>o</b> .
1,1-Dichloroethene	8	106-125	28-167	18	0	6	4-9	29	<b>o</b>	0
trans-1,2-Dichloroethene	<b>—</b>	106-110	38-155	8	0	6	4-6	20	O	0
12-Dichloropropane	8	99-109	44-156	18	0	6	2-7	20	တ	0
cis-1,3,Dichloropropene	<b>8</b>	94-110	22-178	18	0	6	4-6	20	O)	0
trans-1,3,- Dichloroprobene	- <del> </del>	90-111	22-17	18	0	6	4-6	20	တ	<b>o</b>
Methylene Chloride	18	38-117	25-162	18	0	6	5-14	20	o	0
1,1,2,2. Tetrachloroethane	<b>&amp;</b>	79-105	8-184	18	0	o,	10-70	20	∞	<b>-</b> .
1,1,1,2- Tetrachloroethane	85	70-99	38-150	18	0	6	9-1	20	O	0
Tetrachloroethene	<b>2</b>	90-113	26-162	18	0	<b>o</b>	3-11	20	<b>o</b>	0
1.1.1-Trichloroefhane	<u>&amp;</u>	102-104	41-138	18	0	o .	5-9	20	<b>o</b>	0
1.12-Trichloroethane	<u>~</u>	91-106	39-136	18	0	6	6-8	20	6	0
Trichforoethene	18	100-112	35-146	18	0	6	4-8	70	တ	0
12.3Trichloropropane	\$	79-110	60-140	18	0	6	1-27	20	<b>&amp;</b>	<del>-</del>
Vinyl Chloride		100-113	26-163	18	0	6	9-0	70	6	0

Table J-2 Laboratory Quality Control Summary: MS/MSD Volatile Orginic Compounds Water Samples MIANG, Alpena CRTC, Alpena, Michigan

		Accuracy					Precision			
	Total No. Analyses	Percent Recovery Ranges	Percent Recovery Limits	Number Within Control Limits	Number Outside Control Limits	MSD Total No. Analyses	Range RPD	RPD Limits	Number Within Limits	Number Outside Limits
8020										
Benzene	\$	76-104	39-150	18	0	6	5-19	20	တ	0
Ethyl benzene	48	70-101	37-162	18	0	6	5-12	20	တ	0
Chlorobenzene	\$	64-100	38-150	18	0	<b>б</b>	4-8	20	တ	0
Methyl-tert-butyl-ether		73-148	28-167	18	0	თ	3-18	8	<b>o</b>	0
Toluene	8	70-100	46-148	18	0	6	5-14	20	O	0
1,4-Dimethylbenzene	18	79-101	55-135	18	0	6	6-14	8	6	0
1,3-Dimethylbenzene	\$	86-101	55-135	18	0	თ	8-12	20	6	<b>o</b>
1,2-Dimethylbenzene	<b>8</b> 2	88-104	55-135	18	0	<b>б</b>	8-12	20	6	0
1,2-Dichlorobenzene	<b>&amp;</b>	68-84	1-208	18	0	<b>о</b>	10-12	20	6	0
1,3-Dichlorobenzene	<b>&amp;</b>	83-93	7-187	18	0	6	1-16	50	<b>o</b>	0
Styrene	<b>&amp;</b>	90-101	32-160	18	0	6	7-12	20	တ	<b>o</b>
1,4-Dichlorobenzene	18	85-94	42-143	18	0	6	6-10	20	6	0

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Table J-3 Laboratory Quality Control Summary: MS/MSD Volatile Organic Compounds Soil Samples Michigan

		Accuracy					Precision			
	Total No. Analyses	Percent Recovery Ranges	Percent Recovery Limits	Number Within Control Limits	Number Outside Control Limits	MSD Total No. Analyses	Range RPD	RPD Limits	Number Within Limite	Number Outside Limits
8010										
Bromodichloromethane	4	93-146	42-172	4	0	7	0-20	20	7	0
Bromobenzene	14	81-97	60-140	14	0	7	2-18	70	7	•
Bromoform	4	81-146	13-159	4	0	7	21-40	70	•	-
Romomathana	4	94-104	1-144	4	0	7	0-10	20	7	0
Bromochloromethane	4	100-128	4-133	4	0	7	3-7	70	7	•
Carbon tetrachloride	4	87-108	43-143	14	0	7	0-11	20	7	0
2-Chloroethlwind eter	4	64-108	14-186	4	0	7	7-29	20	ဖ	
Chlorobenzene	4	89-100	38-150	4	0	7	9-12	20	7	0
Chloroathane	4	100-111	46-137	4	0	7	8-15	20	7	0
Chloroform	41	95-100	49-133	4	0	7	0-12	20	7	<b>o</b>
Chloromethans	4	93-113	1-193	14	0	7	4-56	70	ဖ	-
2-Chlorotoluene	4	80-100	60-140	14	0	7	8.12	70	7	0
4-Chlorotoluene	7	81-100	60-140	4	0	7	5-16	70	1	0
	7	50-170	42-172	4	0	7	0-25	70	•	-
2	<u>*</u>	81-121	24-191	4	0	7	7-19	50	7	0
Dibromochloromethane	<b>7</b>	108-113	24-191	14	0	7	15-26	50	<b>6</b>	-
1.2-Dichlorobenzene	<b>7</b>	81-110	1-208	4	0	_	3-31	50	60	-
1 2 Dicklosoftsmans	4	27-92	42-143	13	-	7	3-27	20	ស	2

Table J-3 Laboratory Quality Control Summary: MS/MSD Volatile Organic Compounds Soil Samples MIANG, Alpena CRTC, Alpena, Michigan

		Accuracy					Precision			
	Total No. Analyses	Percent Recovery Ranges	Percent Recovery Limits	Number Within Control Limits	Number Outside Control Limits	MSD Total No. Analyses	Range RPD	RPD Limits	Number Within Limits	Number Outside Limits
8010										
1,4-Dichlorobenzene	4	89-95	42-143	4	0	7	3-31	70	•	_
1,1-Dichloroethane	14	69-100	47-132	4	0	7	3-10	20	7	0
1,2-Dichloroethane	14	100-128	51-147	44	0	^	3-16	20	7	0
1,1-Dichloroethene	4	68-111	28-167	14	0	7	7-15	20	7	0
trans-1,2-Dichloroethene	14	89-100	38-155	14	0	7	0-15	70	7	0
1,2-Dichloropropane	14	100-113	44-156	14	0	7	7-12	70		0
Methylene Chloride	14	28-282	46-148	œ	9	7	3-26	20	€	-
cis-1,3-Dichloropropene	4	84-110	22-178	14	0	7	7-20	20	7	0
trans-1,3-Dichloropropene	4-	98-112	22-178	14	0	7	6-21	. 20	7	0
1,1,2,2-Tetrachloroethane	4	85-129	8-184	4	0	7	5-21	20	•	-
1,1,1,2-Tetrachloroethane	41	89-100	38-150	4	0	7	9-12	20	۲	0
Tetrachloroethene	14	77-100	26-162	14	•	7	3-12	20	7	0
1,1,1-Trichloroethane	4	85-111	41-138	4	0	7	ъ. 8	20	7	0
1,1,2-Trichloroethane	14	108-129	39-136	14	0	7	5-28	20	7	0

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Table J-3 Laboratory Quality Control Summary: MS/MSD Volatile Organic Compounds Soil Samples MIANG, Alpena CRTC, Alpena, Michigan

		Accuracy					Precision			
	Total No. Analyses	Percent Recovery Ranges	Percent Recovery Limits	Number Within Control Limits	Number Outside Control Limits	MSD Total No. Analyses	Range RPD	RPD Limits	Number Within Limits	Number Outside Limits
8010		100	L	:	C	r	ç	ç	٢	C
Trichloroethene	4	97-105	35-146	4	<b>.</b>	`	51-0 21	2	•	> '
1,2,3,-Trichloropropane	4	78-100	60-140	4	0	^	25-40	8	ស	~
Vinyi Chloride	4	104-113	26-163	14	0	7	0-5	20	7	0
8020										
Benzehe	14	76-100	37-162	4	0	^	8-12	20	7	0
Ethyl benzene	14	76-89	38-150	14	0	7	5-16	20	7	0
Chlorobenzene	14	70-82	28-167	14	0	7	8-22	20	60	_
Methyl-tert-butyl-ether	4	100-136	25-162	4	0	7	5-28	20	ιo	7
Toluene	4	70-102	55-135	4	0	7	1-22	70	ဖ	-
1,4-Dimethylbenzene	4	64-76	55-135	14	0	7	3-17	20	7	0
1,3-Dimethylbenzene	4	64-76	55-135	14	0	7	3-17	20	7	0
1,2-Dimethylbenzene	14	64-76	1-208	14	0	7	3-17	20	7	0
1,2-Dichlorobenzene	14	49-60	7-187	14	0	_	3-27	70	ώ	-
1,4-Dichlorobenzene	4	47-60	42-123	14	0	7	5-31	70	œ	-
1,3-Dichlorobenzene	4	39-64	42-143	13	-	7	3-31	20	<b>6</b> 0	-
Styrene	4	50-75	32-160	14	0	7	10-25	20	8	-

Table J-4 Laboratory Control Summary: MS/MSD Semivolatile Organic Compounds, Water Samples, MIANG, Alpena CRTC, Alpena, Michigan

		Accuracy					Precision			
	Total No. Analyses	Percent Recovery Ranges	Percent Recovery Limits	Number Within Control Limits	Number Outside Control Limits	MSD Total No. Analyses	Range RPD	RPD Limits	Number Within Limits¹	Number Outside Limits
Phenol	9	61-83	40-120	9	0	0		20		
bis(2-chloroethyl)ether	ဖ	64-80	50-110	ဖ	0	0		20		
2-Chlorophenol	ဖ	61-81	50-110	9	0	0		20		
n-Nitroso-di-n-propylamine	9	60-84	50-110	9	0	0		20		
Hexachloroethane	ဖ	58-64	20-110	9	0	0		20		
Isophorone	ဖ	98-99	50-110	9	0	0		20		
1,2,4-Trichlorobenzene	9	57-73	40-100	ဖ	0	0		20		
Naphthalene	ø	08-99	30-110	9	0	0		20		
4-Chloroaniline	φ	10-135	10-120	ιΩ	-	0		20		
2,4,6-Trichlorophenol	ဖ	54-72	40-120	ဖ	0	0		20		
2,4-Dinitrophenol	9	40-46	30-120	9	0	0		20		
Diethlyphthalate	Ģ	62-78	50-120	9	0	0		20		
n-Nitrosodiphenylamine	ဖ	49-102	30-110	9	0	0		20		
Hexachlorobenzene	9	98-99	40-120	ဖ	0	0		20		
Benzo(a)pyrene	9	52-74	50-120	9	0	0		20		

Note: 1)

The 10/92 SOW for low-level semi-volatiles does not require matrix spike/matrix spike duplicat analysis and, therefore no data is presented in this table.

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Number Outside Limits Table J-5 Laboratory Control Summary: MS/MSD Semivolatile Organic Compounds, Soil Samples, Number Within Limits ဖ S RPD Limits 33 2 36 ည 19 47 47 23 27 Precision Range RPD 10-46 16-35 11-45 12-43 12-43 0-70 141 12-41 848 8-45 0-47 MIANG, Alpena CRTC, Alpena, Michigan No. Analyses **MSD Total** Outside Control Number Limits Number Within Control Limits 4 5 <u>स</u> 13 5 4 4 14 12 Percent Recovery 17-109 35-142 26-103 11-114 28-890 41-126 31-137 25-102 28-104 38-107 Limits Percent Recovery Ranges 35-133 21-102 35-109 Accuracy 32-85 32-92 14-87 38-99 34-86 Total No. Analyses 7 4 7 7 4 4 4 7 7 4 n-Nitroso-di-n-propylamine 4-Chloro-3-methylphenol 1,2,4-Trichlorobenzene 1,4-Dichlorobenzene Pentachlorophenol 2,4-Dinitrotoluene 2-Chlorophenol Ancenapthene 4-Nitrophenol Pyrene Phenol

Table J-6 Laboratory Control Summary: MS/MSD Metals, Water Samples MIANG, Alpena CRTC, Alpena, Michigan

		Accuracy					Precision			
	Total No. Analyses	Percent Recovery Ranges	Percent Recovery Limits	Number Within Control Limits	Number Outside Control Limits	MSD Total No. Analyses	Range RPD	RPO Limits	Number Within Limits	Number Outside Limits
Antimony	22	86-124	75-125	22	0	7	8-200	2	5	•
Arsenic	22	81-106	75-125	22	0	7	21.1-200	20	∞	က
Beryllim	22	89-107	75-125	22	0	-	0	20	=	0
Cadmium	77	88-108	75-125	23	0	1	,	20	=	0
Chromium	77	90-107	75-125	22	0	7	0	20	=	0
Copper	. 22	90-105	75-125	23	0	7	0-200	50	9	-
Mercury	22	96-102	75-125	22	0	=	0	20	=	0
Nickel	22	96-101	75-125	22	0	Ξ	0	20	=	0
Lead	22	73-120	75-125	21	-	=	0	, 20 ,	=	0
Selenium	22	28-149	75-125	17	S.	=	0-200	70	6	7
Silver	22	89-102	75-125	22	0	<del>*</del>	0-200	70	10	-
Thaillum	22	54-101	75-125	13	<b>o</b>	=	0-200	70	10	-
Zinc	22	84-105	75-125	22	0	11	44-200	20	9	5

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Table J-7 Laboratory Control Summary: MS/MSD Metals, Soll Samples MIANG, Alpena CRTC, Alpena, Michigan

		Accuracy					Precision			
	Total No. Analyses	Percent Recovery Ranges	Percent Recovery Limits	Number Within Control Limits	Number Outside Control Limits	MSD Total No. Analyses	Range RPD	RPD Limits	Number Within Limits	Number Outside Limits
						1	c	6	7	0
Antimony	4	52-102	75-125	7	_		•	3	, (	•
	4	97-128	75-125	13	-	_	0-72	8	က	4
	7	76-116	75-125	4	0	_	0	20	_	0
Beryllim 5	: 7	65-85	75-125	6	5	_	0	20	7	0
Cadmium	· •	85	75-125	-	0	-	200	20	0	<del>-</del>
Cobair	- ;	102.124	75-125	12	0	φ	2-20	20	ဖွ	0
Hexavalent chromium	7 5	62-108	75-125	13	<b>-</b>	7	09-0	70	4	က
Chromium	<u> </u>	97 100	75-175	4	0	_	0-56	20	4	က
Copper	<del></del>	07-100	75-125	. 1	0	7	0	20	7	0
Mercury	4 1	43-11-	75,125	. <del>.</del>	<b>-</b> -	7	0-200	20	S	
Nickel Nickel	<del>-</del> -	65-390	75-125	12	7		0-200	20	က	4
lead ead	<u> </u>	77-117	75-125	14	0	7	0	70	7	0
Selenium	- 4	78-102	75-125	14	0	7	0	20	7	0
	4	66-104	75-125	13	-		0	20	2	0
	4	14-105	75-125	13	+	7	0-47	20	9	-

Table J-8 Laboratory Control Summary: MS/MSD TPH MIANG, Alpena CRTC, Alpena, Michigan

	Accuracy					Precision			
Total No. Analyses		Percent Recovery Limits	Number N Within C Control C Limits	Number Outside Control Limits	MSD Total No. Analyses	Range RPD	RPD V	Number 1 Within	Number Outside Limits
50	43-116	80-120	43	7	25	1-24	20	24	-

Objectives for accuracy were to have 90% of the data within the specified percent recovery levels for that compound or element. Laboratory accuracy was qualitatively assessed by evaluating the following laboratory QC information: sample holding times, method blank, tuning and mass calibration (GC/MS only), internal standard (GC/MS only), LCS and method blank spike recovery, and initial and continuing calibration results calculated from all analyses conducted on environmental samples.

#### Percent Recoveries

Four of 832 water and 8 of 658 soil percent recoveries were outside the control limits for MS/MSD analyses conducted on the samples collected and analyzed for VOCs. Established control limits for VOC percent recovery values are presented in Table J-2 and J-3. Twenty-five of 611 water and 90 of 439 surrogate percent recoveries were outside the control limits for surrogate analysis. Established control limits for VOC percent recovery values are presented in Table J-9. All supporting VOC QC information cited above was also qualitatively evaluated with respect to the analytical accuracy DQOs. Two hundred-thirty-eight VOC data points were rejected for use because the data was qualified "R" indicating unreliable results due to surrogate or internal standard recoveries. Fifty-eight samples analyzed for VOCs were analyzed out of holding times. The majority of the samples were only 1 to 2 days out of holding times. A number of second column conformation analysis were analyzed outside holding times. In the cases when second column conformation analysis were outside holding times the data was qualified accordingly. These results are not considered to have any adverse impact on the environmental data quality.

Eleven of 154 soil and 1 of 105 water percent recovery values calculated were outside the control limits for the MS/MSD analyses conducted on the samples collected and analyzed for SVOCs. Established control limits for SVOC percent recovery values are presented in Table J-4 and J-5. Twenty-one of 738 water and five of 896 soil percent recovery values calculated were outside the control limits for the surrogate analysis conducted on the samples collected and analyzed for SVOCs. Established control limits for SVOC percent recovery values are presented in Table J-10. All supporting SVOC QC information cited above was also qualitatively evaluated with respect to the analytical accuracy DQOs. None of the SVOC data points were rejected for use because the data was qualified "R" indicating unreliable results due to surrogate or internal standard recoveries. Numerous samples analyzed for SVOCs indicated detectable levels of common laboratory contaminants; these samples have been qualified "B" for blank contamination. These results are considered to have some impact on the environmental data quality.

Fourteen of 143 water and 16 of 95 soil PPM percent recovery values from the matrix spike analysis conducted on the samples exceeded recovery limits of 75- to 125- percent. Zero of 6 hexavalent chromium soil percent recovery values from the matrix spike analyses conducted on the water samples exceeded recovery limits of 75- to 125- percent. Established control limits for metals percent recovery values are presented in Table J-6 and J-7. All supporting target analyte metals QA information cited above were also qualitatively evaluated with respect to the analytical accuracy DQO. These results are not considered to have any adverse impact on the environmental data quality.

Table J-9 Laboratory Control Summary: Surrogate Recovery Semivolatile Organic Compounds MIANG, Alpena CRTC, Alpena, Michigan

				WATER					SOIL		
Surrogate	ate	Total No of Surrogate Analysis	Range of Outliers	Recovery Limits	Number Wuthin Control Limits	Number Outside Control Limits	Total No of Surrogate Analysis	Range of Outliers	Recovery Limits	Number Within Control Limits	Number Outside Control Limits
Nitrobe	Nitrobenzene	123	0-22	40-110	121	2	112		23-120	112	0
2-Fluor	2-Fluorobiphenyl	123	0-27	42-110	120	ю	112	27	30-115	111	4
Terphe	Terphenyl-d14	123	3-22	24-140	121	2	112	138-141	18-137	110	2
Phenol-d5	-d5	123	0	17-113	118	S	112		24-113	112	0
2-Fluo	2-Fluorophenol	123	0-15	16-110	118	5	112		25-121	112	0
2,4,6-1	2,4,6-Tribromophenol	123	0-15	18-126	119	4	112	14-015	19-122	110	2
- 2-Chlo	2-Chlorophenol-d4						112		20-130	112	0
Ħ	1,2-Dichlorobenzene-d4						112		20-130	112	0

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Table J-10 Laboratory Control Summary: Surrogate Recovery Volatile Organic Compounds MIANG, Alpena CRTC, Alpena, Michigan

			WATER					SOIL		
Surrogate	Total No of Surrogate Analysis	Range of Outliers	Recovery Limits	Number Wuthin Control Limits	Number Outside Control Limits	Total No of Surrogate Analysis	Range of Outliers	Recovery Limits	Number Within Control Limits	Number Outside Control Limits
TOEM 4	127	70-160	75-135	119	ھ	11	23-160	76-135	62	15
	i &	150	75-135	80	-	79	42-160	76-135	64	15
DEED 4 (hologonated)	127	49-130	69-123	121	9	82	16-130	69-123	62	20
Brb (lialogenated)		56-130	69-123	11	4	79	33-68	69-123	09	6
BFB 1 (aromatic)	125	55-130	69-123	121	4	71	41-130	69-123	62	O
BFB 2 (aromatic)	2	58-65	69-123	89	2	51	43-67	69-123	39	12
O D E (diolitado)										

• TCFM - Trichlorofluoromethane BFB - Bromofluorobenzene

Seven of 25 percent recovery values for MS/MSD values obtained for TPH analysis were outside control limits listed in Table J-8. All supporting TPH QA information cited above also was qualitatively evaluated with respect to the analytical accuracy DQO. All other QC criteria for TPH analysis were met.

A total of 61 of all 4,702 calculated percent recovery values exceeded control limits indicating that on average 96% accuracy was achieved. As a result of 96% of all percent recoveries meeting control limits, the DQO for accuracy was met. The outliers noted for VOC analysis ranged between 0- to 238- percent recovery. The SVOC outliers ranged from 33- to 133- percent exceeding the range of 10- to 140- percent recovery. All TPH outliers noted were mixed high and low with a range from 43- to 120- percent recovery. The outliers noted for PPM analysis were mixed high and low. The range of outliers noted for PPM were 14- to 390- percent exceeding control limits of 75- to 125- percent recovery. The above results are not considered to have any adverse impact on the environmental data quality.

Sampling accuracy was maximized by adherence to the strict QA program presented in the RI QAPP. All procedures (i.e., soil boring installation, soil samples collection procedures, and health monitoring equipment calibration and operation) used during the RI were documented as standard operating procedures (SOPs). Field QA blanks (i.e., trip blanks, field blanks, and equipment blanks) were prepared such that all samples represented the particular site from which they were collected, and assessed any cross-contamination that may have occurred. The environmental samples associated with the appropriate field QA samples were qualified based on the potential contaminants contained in the field QA samples.

#### Trip blanks

Twenty-seven trip blanks were shipped and analyzed with the environmental samples analyzed for VOCS. Trip blanks with detectable concentrations of contaminants are detailed in section J.2.1 These concentrations could not be attributed to the laboratory environment, and as a result, all concentrations of methylene chloride detected in the associated environmental samples at levels less than 10 times the trip blank concentration were considered blank contamination and were qualified accordingly.

#### Field Blanks

Seven field blanks were obtained and analyzed along with the environmental samples. The field blanks consisted of potable water sources used in the steam cleaner for decontamination of equipment, and ASTM Type II water produced in the field. Levels of chloroform, bromenated compounds, methylene chloride, acetone, ethylbenzene, phenol, bis(2-ethylhexyl)phthalate, diethylphthalate, lead, arsenic, and copper were detected in selected field blanks collected during the RI. The bromenated compounds are attributed to the potable water source. Since these compounds and elements were also detected in associated environmental samples the

concentrations detected which were less than five time that detected in the blank were considered as estimates and were qualified "B" accordingly. Detected compounds for the field blanks are detailed in section J.2.2. The low levels detected in the field blanks are not considered to have contributed to any levels in the associated environmental samples.

#### Equipment Rinseates.

Twenty-one equipment rinseates consisting of ASTM Type II water run through the sampling equipment were analyzed with the environmental to document the effectiveness of the decontamination efforts. Equipment rinseates contained levels of chloroform, methylene chloride, chlororbenzene, ethylbenzene, phenol, bis(2-ethylhexyl)phthalate, diethylphthalate, lead, arsenic, copper, and zinc. The majority of the compounds and elements detected in the equipment rinseates were below the CRQL or were the result of laboratory contamination. All compounds and elements detected in the equipment rinseates are detailed in section J.2.3.

Based on an evaluation of the compounds detected in the field QC blanks overall field accuracy is deemed acceptable, except where noted. A complete discussion of field QC results is presented in section J.2.

#### J.1.1.3 Representativeness

Representativeness was defined as the degree to which the data accurately and precisely represent a characteristic of a population, parameter variations at a sampling location, a process condition, or an environmental condition. Sample representativeness was ensured during the RI by collecting sufficient samples of a population medium, properly distributed with respect to location and time. Representativeness was assessed by reviewing the drilling and sample collection methods used during the Alpena CRTC RI and evaluating the RPD values calculated from the duplicate samples and the concentrations of interferents detected in the field and laboratory QC blanks. The reproducibility of a representative set of samples reflects the degree of heterogeneity of the sampled medium, as well as the effectiveness of the sampling techniques.

Soil samples were collected from nine sites. All borings were advanced with a truck-mounted drilling rig using continuous-flight hollow stem augers. A minimum of two soil samples were collected for laboratory analysis from each soil boring. One sample was collected from just below the ground surface and the second from unsaturated soils just above the water table. A third and fourth sample were sometimes collected based on PID results and/or lithology. Samples were obtained using a split-spoon sampler equipped with stainless steel liners. Blow counts recording relative soil density were noted. Split-spoon samples were field-logged according to the USCS and field-screened with a PID meter and field GC for VOC concentrations. The boring was backfilled with a cement/bentonite slurry. The borings were marked at the surface and surveyed. Soil cuttings were placed on plastic sheeting for later analysis as required for disposal and the MDNR. Surface water samples were collected by directly filling the sample containers with water. Filtered samples for metals analyses were collected using a decontaminated Teflon® bailer and a disposable, 0.45 µm filter. Groundwater samples were obtained after development of each well.

The monitoring wells were allowed to recharge, purged, and then sampled. The volume of water in each well casing was calculated prior to purging. As required, 4 to 5 casing volumes were removed from each well during the purging process. A decontaminated Teflon® bailer was used to remove the stagnant groundwater from each well. Color, degree of turbidity, odor and other physical properties of the water were recorded during development. Additionally, measurement of the pH, temperature, and conductivity of the groundwater were obtained before and after purging, and prior to sampling. These data were collected to ensure a representative groundwater sample was collected.

Based on the evaluation of the factors described above and summarized in section J.3 the samples collected during the RI are considered to be representative of the environmental conditions at the Alpena CRTC.

#### J.1.1.4 Comparability

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared to another and is limited to the other PARCC parameters, because only when precision and accuracy are know can one data set be compared to another. To optimize comparability, only the specific methods and protocols that were specified in the RI QAPP were used to collect and analyze samples during the RI. By using consistent sampling and analysis procedures, all data sets are comparable within the nine sites at Alpena CRTC, between the nine sites, or among ANG facilities nationwide. This consistency ensures that remedial action decision and priorities are based on a consistent data base.

All samples collected for VOC and SVOC analysis were analyzed using the SW-846 8010/8020 (aqueous, soils), 3/90 CLP SOW (soils) and 10/92 Low Concentration SOW (water) respectively. Samples collected for PPM were analyzed using SW-846 3rd edition methods. TPH samples were analyzed by 418.1

Based on the precision and accuracy assessment presented above, the data collected during the RI are considered to be comparable with the data collected during previous investigations.

#### J.1.1.5 Completeness

Completeness was defined as the percentage of useable data obtained from a measurement system. Data may be considered valid and useable even though all QC criteria have not been met. In these cases, data are valid within the constraints identified by data qualifiers. Project completeness was defined as the percentage of data points used to prepare the baseline risk assessment and upon which recommendations for site remediation are based. Objectives for project completeness were set at 90 percent. Values and concentrations reported for analysis conducted that are labeled with the qualifier "R" or "B" are excluded from use in the risk evaluation and remedial recommendations due to increased risk of indicating false positives or omitting compounds or elements that are present.

Based on the evaluation of the laboratory QC results for the 23,761 data points presented in appendix L, these data were considered equal to 93.6 percent complete, and as such, were used as the basis of all recommendations presented in this report. A total of 1,513 data points were rejected for use because the data was qualified "R" indicating unreliable results or "B" indicating possible contamination from an outside source. The data points which were qualified "R" are presented in Table J-11. The data points qualified "B" are presented in Table J-12.

#### J.2 Field Quality Control Assessment

Twenty-seven trip blanks, 7 field blanks, 20 equipment blanks, 14 duplicate soil and sediment samples, and 7 replicates for groundwater were collected and analyzed by the same SOPs and methods used for the 184 environmental samples. Table J-13 contains a cross-reference of the associated field QC blank samples.

#### J.2.1 Trip Blanks

Twenty-seven trip blanks were prepared and analyzed by Compuchem Environmental Corporation in North Carolina. The blanks were prepared in the labs using ASTM Type II water. Trip blanks were used to check for cross-contamination during sample handling and shipping of VOC samples. The trip blanks were stored with the unused sample bottles and returned to the laboratory with each cooler containing environmental samples to be analyzed for VOCs. Table J-14 summarizes the concentrations of the VOCs detected in the trip blanks collected during the RI field effort. The contamination detected in the trip blanks can be attributed to several possible causes. Methylene chloride is a common laboratory contaminant and is frequently detected. The other contamination could be attributed to contamination from samples stored with the trip blanks at the laboratory.

		Table J - 11 Data Points Qualified "R" MIANG, Alpena CRTC, Alpena, Michigan	ata Points ( CRTC, Alp	Qualified "R" ena, Michigan	_			
Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-P1-MW1-GW4	577704	Selenium, Dissolved	0.00	3.00	~	/gn	09/15/93	COMPUCHEM
PC-P1-MW11-GW4	577639	Selenium, Dissolved	00.0	3.00	~	l∕gu	09/14/93	COMPUCHEM
PC-P1-MW12-GW4	577477	Selenium, Dissolved	0.00	3.00	~	/gn	09/14/93	COMPUCHEM
PC-P1-MW14-GW4	\$77709	Selenium, Dissolved	00.0	3.00	≃	/gn	09/15/93	COMPUCHEM
PC-P1-MW6-GW4	578093	Selenium, Dissolved	0.00	3.00	~	l/gu	09/15/93	COMPUCHEM
PC-MP2-MW1-GW4	569872	Thallium, Dissolved	0.00	3.00	~	/gn	08/10/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,1,1,2-Tetrachloroethane	0.00	0.35	~	l/gu	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,1,1-Trichloroethane	0.00	0.35	~	l/gn	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,1,2,2-Tetrachloroethane	00.0	0.40	~	/gn	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,1,2-Trichloroethane	0.00	0.25	~	/gn	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,1-Dichloroethane	0.00	0.35	~	/gn	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,1-Dichloroethylene	0.00	0.35	~	/gn	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,2,3-Trichloropropane	0.00	0.35	~	l/gu	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,2-Dibromoethane	0.00	0.35	~	Vgn	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,2-Dichlorobenzene	0.00	0.30	~	√gn	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,2-Dichloroethane	0.00	0.25	~	l∕gn	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,2-Dichloropropane	0.00	0.30	~	l/gu	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,2-trans-Dichloroethylene	0.00	0.30	<b>~</b>	ng/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,3-Dichlorobenzene	0.00	0.20	~	l/gn	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,3-cis-Dichloropropylene	0.00	0.30	~	ng/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,3-trans-Dichloropropylene	0.00	0.25	~	l/gn	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,4-Dichlorobenzene	0.00	0.20	~	/gn	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	2-Chloroethylvinyl ether	0.00	0.40	~	/gn	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	2-Chlorotoluene	0.00	0.25	~	/gn	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	4-Chlorotoluene	0.00	0.35	<b>~</b>	l/gn	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Bromobenzene	0.00	0.85	≃	//gn	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Bromochloromethane	0.00	0.25	<b>~</b>	∥⁄gn	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Bromodichloromethane	0.00	0.40	~	l∕gu	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Bromoform	0.00	0.50	~	l/gn	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Carbon Tetrachloride	0.00	0.35	~	ng/l	08/12/93	COMPUCHEM

Laboratory	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPLICHEM	COMPLICHEM	COMPLICHEM	COMPLICHEM	COMPLICHEM	COMPLICHEM	COMPLICHEM	COMPUCHEM	COMPUCHEM	COMPOCIEM	COMPOCHEM	COMPOCHEM	COMPOCHEM	COMPUCER	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPOCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	
Date	08/12/93	08/12/93	08/12/93	08/12/93	08/12/93	00/11/02	08/17/93	06/11/00	06/11/93	08/17/93	06/17/00	08/17/93	08/17/93	08/17/93	08/17/93	08/12/93	08/12/93	08/12/93	08/12/93	08/12/93	08/12/93	08/12/93	08/12/93	_	_	09/13/93	08/17/93	08/17/93	08/11/93	08/11/93	08/17/93	
Units	l/gn	ug/l	l/on	, en	1/8m	ug/I	ng/l	ug/1	ug/1	ng/1	ng/1	ng/l	ng/I	ng/I	√gn	/gn	ng/l	ng/l	/gn	l/gn	/gn	/gn	√gn	/gn	mg/kg	/gn	√gn	/gn	ng/l	/gn	ng/l	b
Qual	8	~	; ≃	۵ ۵	<u>م</u> ک	٤ :	<b>*</b> ¢	۷,	× 6	۲ ¢	<b>火</b> 1	<b>×</b> 1	<b>∠</b> (	<b>≃</b>	~	≃ .	<b>∠</b> ;	~	~	~	~	~	~	~	~	~	~	~	~	~	~	ť
Qualified "R" oena, Michigan RDL	0.35	0.50	0.50	0.0	0.30	0.40	0.45	0.50	0.00	0.30	0.30	0.55	0.15	0.20	0.20	0.50	0.15	0.35	0.25	0.20	2.00	0.25	0.25	3.00	0.31	3.00	0.35	0.35	0.40	0.25	0.35	;
ata Points ( CRTC, Alp Result	000	000	00.0	0.00	0.00	0.00	0.00	0.00	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	00.0	00.0	000	000	000	00.0	0.00
Table J - 11 Data Points Qualified "R" MIANG, Alpena CRTC, Alpena, Michigan Analyte Result RDL	Chlorohonzono	Ciliotocalectic	Chloroetnane	Chlorotorm	Dibromochloromethane	Dibromomethane	Methyl bromide	Methyl chloride	Methylene chloride	Tetrachloroethylene	Trichloroethylene	Vinyl chloride	1,2-Dichlorobenzene	1,2-Dimethylbenzene	1,3-Dichlorobenzene	1,3/1,4-Dimethylbenzene	1,4-Dichlorobenzene	Benzene	Chlorobenzene	Ethylbenzene	Methyl-t-Butyl Ether	Styrene	Toluene	Thallium, Dissolved	Thallinm	Colonium Dissolved	1 1 1 2. Tetrachloroethane	1 1 1 Trichloroethane	1,1,1-tiremorethane	1,1,2,2-1 culacilioloculario	1,1,2-1110110100011anv	I,I-Dichioroemane
Lab No	163163	5/15/4	571574	571574	571574	571574	571574	571574	571574	571574	571574	571574	571574	571574	571574	571574	571574	571574	571574	571574	571574	571574	571574	\$71800	571387	100773	170//5	571667	271007	271667	7001/6	271667
Sampleid		PC-MP2-MWS-GW4	PC-MP2-MW5-GW4	PC-MP2-MW5-GW4	PC-MP2-MW5-GW4	PC-MP2-MW5-GW4	PC-MP2-MW5-GW4	PC-MP2-MW5-GW4	PC-MP2-MW5-GW4	PC-MP2-MW5-GW4	PC-MP2-MW5-GW4	PC-MP2-MW5-GW4	PC-MP2-MW5-GW4		N PC-MP2-MW5-GW4		PC-MP2-MW5-GW4	pC-MP2-MW5-GW4	pC-Mp2-MW5-GW4	DC MD2-MW5-GW4	DC MD2-MW5-GW4	pC-Mp2-MW5-GW4	PC-MP2-MW5-GW4	TC-IM Z-IM W-CW	PC-IMITZ-IMI W 3-CW 4	FC-MF2-5D8-5500-02	PC-CG3-MW-GW4	PC-IF4-MWI-GW4	PC-TF4-MWI-GW4	PC-TF4-MWI-GW4	PC-TF4-MWI-GW4	PC-TF4-MW1-GW4

		Table J - 11 Data Points Qualified "R" MIANG, Alpena CRTC, Alpena, Michigan	ata Points ( CRTC, Al <sub>I</sub>	Qualified "R" oena, Michigar	_			
	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-TF4-MW1-GW4	571667	1,1-Dichloroethylene	0.00	0.35	~	l/gu	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	1,2,3-Trichloropropane	00.0	0.35	~	/gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	1,2-Dibromoethane	00.0	0.35	~	//gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	271667	1,2-Dichlorobenzene	0.00	0.30	~	/gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	271667	1,2-Dichloroethane	0.00	0.25	~	l/gu	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	271667	1,2-Dichloropropane	0.00	0.30	~	l/gu	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	271667	1,2-trans-Dichloroethylene	0.00	0.30	~	l/gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	1,3-Dichlorobenzene	0.00	0.20	~	/gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	1,3-cis-Dichloropropylene	00.0	0.30	<b>~</b>	l/gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	\$71667	1,3-trans-Dichloropropylene	00.0	0.25	<b>~</b>	/gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	271667	1,4-Dichlorobenzene	00.0	0.20	~	/gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	2-Chloroethylvinyl ether	00.0	0.40	~	/gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	2-Chlorotoluene	0.00	0.25	~	√gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	271667	4-Chlorotoluene	0.00	0.35	~	√gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	271667	Bromobenzene	0.00	0.85	~	l/gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	271667	Bromochloromethane	0.00	0.25	~	√gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	<b>Bromodichloromethane</b>	0.00	0.40	~	√gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	271667	Bromoform	0.00	0.50	~	l∕gu	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Carbon Tetrachloride	0.00	0.35	~	l/gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Chlorobenzene	0.00	0.35	~	l/gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Chloroethane	0.00	0.50	≃	/gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	271667	Chloroform	0.00	0.35	~	l/gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	271667	Dibromochloromethane	00.0	0.30	≃	/gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	271667	Dibromomethane	0.00	0.40	~	l/gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	271667	Methyl bromide	0.00	0.45	<b>~</b>	l/gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Methyl chloride	0.00	0.50	<b>~</b>	l/gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Methylene chloride	0.23	0.00	<b>~</b>	/gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Tetrachloroethylene	0.00	0.30	~	//gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	271667	Trichloroethylene	0.00	0.30	~	l/gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	271667	Vinyl chloride	0.00	0.55	~	l∕gu	08/17/93	COMPUCHEM

	Laboratory	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM
	Date	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/11/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93
	Units	l/gu	l/gn	/gn	/gn	l/gn	l/gn	√gn	l/gn	√gn	/gn	/gn	l/gn	l/gn	l/gn	/gn	/gn	l/gn	l∕gn	√gn	/gn	l/gu	∥gn	/gn	√gn	√gn	l/gn	l∕gn	∥/gn	l∕gn	l/gn
	Qual	~	~	~	~	~	~	~	~	~	~	~	~	~	<b>~</b>	<b>~</b>	~	~	~	~	~	~	<b>∡</b>	<b>~</b>	~	~	~	~	~	~	~
Qualified "R" Jena, Michigan	RDL	0.00	0.20	0.20	0.00	0.15	0.00	0.35	0.25	0.20	5.00	0.25	0.00	0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25
ta Points ( RTC, Alp	Result	0.88	00.0	0.00	0.04	00.0	0.04	0.00	0.00	0.00	0.00	0.00	6.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	00.0	00.0	00.0	0.00	0.00	00.0	00.0	0.00
Table J - 11 Data Points Qualified "R" MIANG, Alpena CRTC, Alpena, Michigan	Analyte	1 2-Dichlorobenzene	•		•		•		Chlorobenzene	Ethylbenzene	Methyl-t-Butyl Ether	Styrene	Toluene	1.1.2-Tetrachloroethane	1.1.1-Trichloroethane	1.1.2.2-Tetrachloroethane	1.1.2-Trichloroethane	1.1-Dichloroethane	1.1-Dichloroethylene	1.2.3-Trichloropropane	1.2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1.2-Dichloropropane	1.2-trans-Dichloroethylene	1.3-Dichlorobenzene	1.3-cis-Dichloropropylene	1.3-trans-Dichloropropylene	1,4-Dichlorobenzene	2-Chloroethylvinyl ether	2-Chlorotoluene
	Lab No	271667	\$71667	571667	571667	571667	571667	271667	571667	271667	571667	271667	571667	571661	571661	571661	571661	571661	571661	571661	571661	571661	571661	571661	571661	571661	571661	571661	571661	571661	571661
	Sampleid	DC TEALMWI-GWA	DC TEA MW1-GW4	PC-TF4-MW1-GW4	DC TEA_MW1_GW4	PC-TF4-MW1-GW4	PC-TF4-MW1-GW4	PC-TF4-MW1-GW4	PC-TF4-MW1-GW4	PC-TF4-MW1-GW4	PC-TF4-MW1-GW4	PC-TE4-MW1-GW4	PC-TE4-MW1-GW4	DC TEA MW8-GW4		25 PC-TF4-MW8-GW4		PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4

	Laboratory	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM
	Date	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/11/93	08/17/93	08/11/93	08/17/93	08/17/93	08/17/93	08/11/93	07/31/93	07/31/93	07/31/93	07/31/93	07/31/93	07/31/93			07/31/93	_	07/31/93	07/31/93	07/31/93
	Units	√gn	l/gn	//gn	//gn	//gn	l∕gu	l/gn	//gn	/gn	l/gn	l/gu	l/gn	√gn	/gn	/gn	l∕gn	l/gn	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
	Qual	~	~	<b>~</b>	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Qualified "R" pena, Michigan	RDL	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.35	0.30	0.40	0.45	0.50	00.00	0.30	0.30	0.55	0.94	0.63	0.89	0.78	0.94	1.50	89.0	89.0	1.10	1.10	66.0	1.50	1.00
ata Points (	Result	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00	00.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	00.0	0.00	00.00
Table J - 11 Data Points Qualified "R" MIANG, Alpena CRTC, Alpena, Michigan	Analyte	4-Chlorotoluene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Вготобогт	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Dibromochloromethane	Dibromomethane	Methyl bromide	Methyl chloride	Methylene chloride	Tetrachloroethylene	Trichloroethylene	Vinyl chloride	1,1,1,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,2,3-Trichloropropane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,2-trans-Dichloroethylene	1,3-Dichlorobenzene	1,3-cis-Dichloropropylene	1,4-Dichlorobenzene	2-Chlorotoluene
	Lab No	571661	571661	571661	571661	571661	571661	571661	571661	571661	571661	571661	571661	571661	571661	571661	571661	571661	567556	567556	567556	567556	567556	567556	567556	567556	567556	567556	567556	567556	567556
	Sampleid	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-MW8-GW4	PC-TF4-SD010B	PC-TF4-SD010B	PC-TF4-SD010B	PC-TF4-SD010B	PC-TF4-SD010B	PC-TF4-SD010B	PC-TF4-SD010B	PC-TF4-SD010B	PC-TF4-SD010B	PC-TF4-SD010B	PC-TF4-SD010B	PC-TF4-SD010B	PC-TF4-SD010B

Laboratory	07/31/93 COMPUCHEM	07/31/93 COMPUCHEM	17/31/93 COMPUCHEM			_	_		07/31/93 COMPUCHEM	08/01/93 COMPUCHEM						_	•				_			•					•	08/13/93 COMPUCHEM	No.112/03 COMPLICHEM
Date	_												_	_		90	_			90	_	_	_		_	_		_	_	_	Ī
Units	ug/kg	ue/ke	no/ko	28/V	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	/gn	Vgn	l/gn	mg/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	2//011
Qual	~	~	, α	ء <u>د</u>	<b>火</b> i	~	~	~	~	~	~	~	<b>∝</b>	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	<b>~</b>	۵
Qualified "R" Ipena, Michigan RDL	1.10	0 78	000	0.74	99.0	0.94	0.94	0.83	0.83	302.00	319.00	313.00	303.00	439.00	729.00	302.00	3.00	3.00	3.00	238.00	0.94	2.80	0.63	0.89	0.94	1.40	89.0	89.0	1.10	0.94	001
ata Points CRTC, Al Result	0.00	000	00.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	00.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Table J - 11 Data Points Qualified "R" MIANG, Alpena CRTC, Alpena, Michigan Analyte RDL	4-Chlorotolnene	Damotonia	Divinouenteene	Bromochloromethane	Carbon Tetrachloride	Chlorobenzene	Dibromomethane	Tetrachloroethylene	Trichloroethylene	Potassium	Potassium	Potassium	Potassium	Potassium	Potassium	Potassium	Selenium, Dissolved	Selenium, Dissolved	Selenium, Dissolved	Potassium	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,2,3-Trichloropropane	1.2-Dibromoethane	1.2-Dichloroethane	1,2-Dichloropropane	2-Chloroethylvinyl ether	Bromochloromethane	
Lab No	955L95	000000	000/90	567556	567556	567556	567556	567556	567556	\$67739	567743	567735	567755	567747	567751	567759	577018	577513	577712	570788	570781	570781	570781	570781	570781	570781	570781	570781	570781	570781	10/0/0
Sampleid	TEL COOLOD	r4-SDOIOB	PC-TF4-SD010B	PC-TF4-SD010B	PC-TF4-SD010B	PC-TF4-SD010B	PC-TF4-SD010B	PC-TE4-SD010B	DC TEA SD010B	DC TEA CD011	PC-TE4-SD011	DC-TEA-STOIL	PC-TE4-SD013	DC-TEA-SD01	PC-TE4-SD018	PC-TE4-SD115	PC-SF5-MW8-GW4	PC-FF7-MW2-GW4	PC-FF7-MW3-GW4	PC-HN8-SR2-SS02-03	PC-HN8-SB3-SS01-02	PC-HN8-SB3-SS01-02	PC-HN8-SB3-SS01-02	PC-HN8-SB3-SS01-02	PC-HN8-SB3-SS01-02	PC-HN8-SR3-SS01-02	PC-HN8-SB3-SS01-02	PC-HN8-SB3-SS01-02	PC-HN8-SB3-SS01-02	PC-111103-212-2221-02	PC-HN8-3D3-3301-02

		Table J - 11 Data Points Qualified "R"	ata Points	Qualified "R"				
Sampleid	Lab No	Analyte RDL Result RDL	Result	RDL	Qual	Units	Date	Laboratory
PC-HN8-SB3-SS01-02	570781	Bromoform	0.00	0.94	~	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS01-02	570781	Dibromochloromethane	0.00	0.83	~		08/13/93	COMPUCHEM
PC-HN8-SB3-SS09-11	570804	Potassium	0.00	236.00	~	mg/kg	08/13/93	COMPUCHEM
PC-HN8-SB4-SS12-14	570810	Potassium	0.00	243.00	~	mg/kg	08/13/93	COMPUCHEM
PC-RT9-MW6-GW4	577718	Selenium, Dissolved	0.00	3.00	~	l/gu	09/15/93	COMPUCHEM
PC-BG1-SB1-SS02-03	569298	Potassium	0.00	240.00	~	mg/kg	08/09/93	COMPUCHEM
PC-BG1-SB1-SS09-10	569299	Potassium	0.00	241.00	2	mg/kg	66/60/80	COMPUCHEM
PC-PW-PW2-GW4	569871	Thallium, Dissolved	0.00	3.00	~	/gn	08/10/93	COMPUCHEM
PC-ER20	577485	Selenium, Dissolved	0.00	3.00	~	l/gn	09/14/93	COMPUCHEM
PC-ER21	578094	Selenium, Dissolved		3.00	<b>~</b>	/Sn	09/15/93	COMPUCHEM
PC-FB04	573128	2,4,5-Trichlorophenol		20.00	~	l/gu	08/23/93	COMPUCHEM
PC-FB04	573128	2,4,6-Trichlorophenol	0.00	5.00	~	l/gn	08/23/93	COMPUCHEM
PC-FB04	573128	2,4-Dimethylphenol	0.00	5.00	~	/gn	08/23/93	COMPUCHEM
PC-FB04	573128	2,4-Dinitrophenol	_	20.00	~	/gn	08/23/93	COMPUCHEM
PC-FB04	573128	2-Chlorophenol		5.00	~	/gn	08/23/93	COMPUCHEM
PC-FB04	573128	2-Methyl-4,6-Dinitrophenol		20.00	~	/gn	08/23/93	COMPUCHEM
PC-FB04	573128	2-Methylphenol	0.00	5.00	~	/gn	08/23/93	COMPUCHEM
PC-FB04	573128	2-Nitrophenol	0.00	5.00	~	l/gu	08/23/93	COMPUCHEM
PC-FB04	573128	4-Chloro-3-methyl phenol	0.00	5.00	~	√gn	08/23/93	COMPUCHEM
PC-FB04	573128	4-Methylphenol	_	5.00	~	ng/l	08/23/93	COMPUCHEM
PC-FB04	573128	4-Nitrophenol	0.00	20.00	~	ng/l	08/23/93	COMPUCHEM
PC-FB04	573128	Pentachlorophenol	0.00	20.00	<b>~</b>	/gn	08/23/93	COMPUCHEM
PC-FB04	573128	Phenol	0.00	5.00	≃	l/gn	08/23/93	COMPUCHEM

te Laboratory	COMPUCHEM			09/15/93 COMPUCHEM	09/15/93 COMPUCHEM						09/14/93 COMI CONEM						09/14/93 COMPUCHEM	09/14/93 COMPUCHEM	09/14/93 COMPUCHEM	09/14/93 COMPUCHEM	09/14/93 COMPUCHEM	09/14/93 COMPUCHEM	09/15/93 COMPUCHEM						09/15/93 СОМРОСНЕМ	09/09/93 COMPUCHEM	09/09/93 COMPUCHEM	09/09/93 COMPUCHEM	
Units Date				60 Van					-					_	√o Van	00 Vgn	_	_	_		_	_	_						) Van			_	
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m Qual	0	n c		B	Œ	םנ	<b>Q</b> £	IJ t	<b>2</b> 20 1	<b>m</b> (	za t	Ω	<b>2</b> 0	m	Ω	щ	ш	щ	-	, <del>jul</del>			-										
Qualified "B" pena, Michiga RDL		0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	000	000	000	00.0	00.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	00.0	000	8.0	0.00	0.00
ata Points CRTC, Al Result	•	0.42	4.10	3.00	00 (2.5	182.00	0.34	06.0	0.50	12.00	0.15	0.28	0.15	09.0	2.00	0.12	0.14	990	0.00	77.0		2.00	080.80	0.21	0.22	0.80	09.0	2.00	4.00	0.30	0.50	0.13	0.47
Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan Analyte RDL		Methylene chloride	Arsenic, Dissolved	Ling Ethylhexyl)nhthalate	01s(z-tury intexy i)primitation	Total Petroleum Hydrocarbons 2.00	Methylene chloride	Di-n-butyl phthalate	Phenol	bis(2-Ethylhexyl)phthalate	Methylene chloride	1,4-Dichlorobenzene	Toluene	Diethyl phthalate	his/2-Ethylhexyl)nhthalate	Mothylone chloride	1 2 Distlement	1,3-Dieniologenzene	I,4-Dichiorobenzene	Toluene	Diethyl phthalate	bis(Z-Ethylhexyl)pninalate	Total Petroleum Hydrocarbonsu.80	Methylene chloride	Ethylbenzene	Di-n-butyl phthalate	Diethyl phthalate	Phenol	Ling Ethylhovy Dubthalate	018(z-Eurymen)	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene
Lab No		577693	\$7770A		2//69/	<i>\$111</i> 06	577552	577635	577635	577635	577472	577472	577477	577473	CLALLS	214/16	51775	515/75	577515	577515	577525	577525	577527	577694	577694	577699	877699	64776	00722	660//6	576497	576497	576497
biolome	mi prote	PC-P1-MW1-GW4	MAN TANK THE OWN	PC-FI-MWI-GW+	PC-P1-MW1-GW4	PC-P1-MW1-GW4	PC-P1-MW11-GW4	PC-P1-MW11-GW4	DC DI MW11-GW4	PC-FI-MW11-GW4	PC-PI-MW12-GW4	pc pl-MW12-GW4	FC-LI-MWIZ-GW	FC-FI-MW12-GW4	FC-FI-MW12-GW4	PC-PI-MW12-GW4	PC-P1-MW13-GW4	PC-P1-MW13-GW4	PC-P1-MW13-GW4	PC-P1-MW13-GW4	PC-P1-MW13-GW4	PC-P1-MW13-GW4	PC-P1-MW13-GW4	PC-P1-MW14-GW4	PC-P1-MW14-GW4	PC-P1-MW14-GW4	pC p1.MW14.GW4	FC-F I-IVI WIT-CON	FC-FI-M W 14-GW4	PC-P1-MW14-GW4	PC-P1-MW2-GW4	PC-P1-MW2-GW4	PC-P1-MW2-GW4

		Table J - 12 Data Points Qualitied "B" MIANG, Albena CRTC, Albena, Michigan	Jata Points ( a CRTC, Alt	Jualitied "B" Jualitied "B"				
Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-P1-MW2-GW4	576499	Di-n-butyl phthalate	0.70	0.00	В	√gn	09/09/93	COMPUCHEM
PC-P1-MW2-GW4	576499	bis(2-Ethylhexyl)phthalate	5.00	0.00	В	l/gu	09/09/93	COMPUCHEM
PC-P1-MW2-GW4	576502	Total Petroleum Hydrocarbons 0.50	ns0.50	0.25	В	mg/l	09/09/93	COMPUCHEM
PC-P1-MW3-GW4	576679	1,2-Dichlorobenzene	0.75	0.00	æ	l/gu	09/10/93	COMPUCHEM
PC-P1-MW3-GW4	576679	1,3-Dichlorobenzene	0.21	0.00	Ф	/gn	09/10/93	COMPUCHEM
PC-P1-MW3-GW4	576679	1,4-Dichlorobenzene	0.35	0.00	В	√Jn	09/10/93	COMPUCHEM
PC-P1-MW3-GW4	576673	Antimony	46.20	0.00	()B	l/gn	09/10/93	COMPUCHEM
PC-P1-MW3-GW4	576673	Copper	5.70	0.00	()B	/gn	09/10/93	COMPUCHEM
PC-P1-MW3-GW4	576673	Selenium	00.9	0.00	B	√gn	09/10/93	COMPUCHEM
PC-P1-MW3-GW4	576673	Zinc	12.60	0.00	()B	/gn	09/10/93	COMPUCHEM
PC-P1-MW3-GW4	576682	bis(2-Ethylhexyl)phthalate	8.00	0.00	B	l/gu	09/10/93	COMPUCHEM
PC-P1-MW3-GW4	576685	Total Petroleum Hydrocarbons 0.40	ns0.40	0.25	B	l/gm	09/10/93	COMPUCHEM
PC-P1-MW4-GW4	576697	Methylene chloride	0.37	0.00	В	l/gu	09/10/93	COMPUCHEM
PC-P1-MW4-GW4	576697	1,2-Dichlorobenzene	0.19	0.00	В	l/gu	09/10/93	COMPUCHEM
PC-P1-MW4-GW4	576697	1,3-Dichlorobenzene	0.23	0.00	B	l∕gn	09/10/93	COMPUCHEM
PC-P1-MW4-GW4	576697	1,4-Dichlorobenzene	89.0	0.00	B	ng/l	09/10/93	COMPUCHEM
PC-P1-MW4-GW4	216697	Toluene	0.11	0.00	В	ng/l	09/10/93	COMPUCHEM
PC-P1-MW4-GW4	576675	Antimony	38.60	0.00	()B	//gn	09/10/93	COMPUCHEM
PC-P1-MW4-GW4	576675	Selenium	20.00	0.00	æ	//gn	09/10/93	COMPUCHEM
PC-P1-MW4-GW4	576703	bis(2-Ethylhexyl)phthalate	2.00	0.00	B	l∕gu	09/10/93	COMPUCHEM
PC-P1-MW4-GW4	576705	Total Petroleum Hydrocarbons 0.60	09.0suc	0.25	В	mg/l	09/10/93	COMPUCHEM
PC-P1-MW6-GW4	578081	Methylene chloride	0.40	0.00	æ	l∕gu	09/15/93	COMPUCHEM
PC-P1-MW6-GW4	578084	bis(2-Ethylhexyl)phthalate	2.00	0.00	В	√gn	09/15/93	COMPUCHEM
PC-P1-MW6-GW4	578090	Total Petroleum Hydrocarbons 0.70	ons0.70	0.25	2	mg/l	09/15/93	COMPUCHEM
PC-P1-SB10-SS00-02	573529	Chloroform	0.82	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB10-SS00-02	573535	Zinc	1.20	00.0	()B	mg/kg	08/24/93	COMPUCHEM
PC-P1-SB10-SS03-04	573537	Chloroform	0.81	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB10-SS03-04	573540	Zinc	3.00	0.00	B	mg/kg	_	COMPUCHEM
PC-P1-SB11-SS00-02	573519	1,1,1-Trichloroethane	0.89	0.00	В	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB11-SS00-02	573519	Chloroform	0.48	0.00	В	ug/kg	08/24/93	COMPUCHEM

ampleid PC-P1-SB11-SS00-02 PC-P1-SB11-SS00-02 PC-P1-SB11-SS00-02 PC-P1-SB11-SS00-02 PC-P1-SB11-SS00-02 PC-P1-SB11-SS00-02 PC-P1-SB11-SS03-04 PC-P1-SB11-SS03-04 PC-P1-SB11-SS03-04 PC-P1-SB12-SS00-02 PC-P1-SB12-SS00-02 PC-P1-SB12-SS00-02 PC-P1-SB12-SS00-02 PC-P1-SB12-SS00-02 PC-P1-SB12-SS00-02 PC-P1-SB12-SS00-02 PC-P1-SB12-SS00-02 PC-P1-SB13-SS00-02 PC-P1-SB13-SS00-02 PC-P1-SB13-SS00-02 PC-P1-SB13-SS00-02 PC-P1-SB13-SS00-02 PC-P1-SB13-SS00-02	Lab No 573519 573519 573519 573519 573519 57352 57352 57352 57350	Analyte	Data Points C Alp Result  4.60  0.07  0.03  0.03  0.03  0.03  0.03  0.03  0.03  0.03  0.03  0.05  0.03  0.05  0.05  0.05  0.03  0.07  0.03  0.07  0.03  0.05  0.05  0.05  0.05  0.05  0.05  0.05  0.05  0.05  0.05  0.05	Qualified "B" ena, Michigan RDL RDL 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	Qual B B B B B B B B B B B B B B B B B B B	Units  ug/kg  ug/kg		Laboratory  COMPUCHEM
	573545 573514 573514 573514	Zinc 1,1,1-Trichloroethane Chloroform	3.50 0.36 0.63	0.00	ппп	mg/kg ug/kg ug/kg		COMPUCHEM COMPUCHEM COMPUCHEM
	573514	1,2-Dimethylbenzene	0.16	0.00	Ω	ug/kg	08/24/93	COMFOCIALISM

	Laboratory	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM		COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPLICHEM
	Date	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93
	Units	ug/kg	mg/kg	mg/kg	ug/kg	ug/kg	ug/kg	mg/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	mg/kg	ug/kg	ug/kg	ug/kg	ug/kg	mg/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	mg/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	me/ke
	Qual	Э	()B	В	23	В	<b>m</b>	()B	B	8	B	B	B	B	В	Ω	B	B	æ	В	Ω	Д	B	B	B	B	B	മ	Ω	В	В
Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan	RDL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	00.0	0.00	00.0	0.00	0.00	0.00	00.0	0.00	0.00	000
Data Points na CRTC, Al	Result	0.17	0.73	4.30	0.26	0.41	1.80	2.00	0.30	0.79	5.40	0.45	0.22	4.20	0.70	4.90	0.45	0.22	5.00	0.26	69.0	2.50	0.29	0.65	3.80	0.05	0.61	5.90	0.25	0.16	5.70
Table J - 12 MIANG, Alpe	Analyte	Toluene	Arsenic	Zinc	1,1,1-Trichloroethane	Chloroform	Methylene chloride	Zinc	1,1,1-Trichloroethane	Chloroform	Methylene chloride	1,3-Dichlorobenzene	Toluene	Zinc	Chloroform	Methylene chloride	1,3-Dichlorobenzene	Toluene	Zinc	1,1,1-Trichloroethane	Chloroform	Methylene chloride	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Zinc	1,1,1-Trichloroethane	Chloroform	Methylene chloride	1,2-Dimethylbenzene	Toluene	Zinc
	Lab No	573514	573517	573517	573625	573625	573625	573627	573630	573630	573630	573630	573630	573632	573606	573606	573606	573606	573608	573615	573615	573615	573615	573615	573620	573601	573601	573601	573601	573601	573603
	Sampleid	PC-P1-SB20-SS00-02	PC-P1-SB20-SS00-02	PC-P1-SB20-SS00-02	PC-P1-SB4-SS00-01	PC-P1-SB4-SS00-01	PC-P1-SB4-SS00-01	PC-P1-SB4-SS00-01	PC-P1-SB4-SS02-03	PC-P1-SB4-SS02-03	PC-P1-SB4-SS02-03	PC-P1-SB4-SS02-03	PC-P1-SB4-SS02-03	PC-P1-SB4-SS02-03	PC-P1-SB5-SS00-02	PC-P1-SB5-SS00-02	PC-P1-SB5-SS00-02	PC-P1-SB5-SS00-02	PC-P1-SB5-SS00-02	PC-P1-SB5-SS03-04	PC-P1-SB5-SS03-04	PC-P1-SB5-SS03-04	PC-P1-SB5-SS03-04	PC-P1-SB5-SS03-04	PC-P1-SB5-SS03-04	PC-P1-SB6-SS00-02	PC-P1-SB6-SS00-02	PC-P1-SB6-SS00-02	PC-P1-SB6-SS00-02	PC-P1-SB6-SS00-02	PC-P1-SB6-SS00-02

	No.	Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan Analyte	Data Points ( 1a CRTC, Alg Result	Qualified "B" Jena, Michigan RDL	Qual	Units	Date	Laboratory
Sampiera			6	6	٥	A. A.	08/24/93	COMPUCHEM
PC-P1-SB6-SS03-04	\$73596	1,1,1-Trichloroethane	0.22	0.00	<u>a</u> p	מא/אמו	08/24/03	COMPUCHEM
PC-P1-SB6-SS03-04	573596	Chloroform	0.74	0.00	Q P	ug/kg	08/24/03	COMPUCHEM
PC-P1-SB6-SS03-04	573598	Zinc	01.9	0.00	מנ	III B/ N B	08/24/23	COMPLICHEM
PC-P1-SR7-SS00-02	573586	1,1,1-Trichloroethane	0.48	0.00	י מ	ug/kg	06/24/73	COMPLICHEM
PC-P1-SB7-SS00-02	573586	Chloroform	0.81	0.00	ום	ug/kg	08/24/93	COMPLICHEM
PC-P1-SB7-SS00-02	573588	Zinc	2.80	0.00	<b>2</b> 0 £	mg/kg	08/24/93	COMPLICHEM
PC-P1-SB7-SS03-04	573578	1,1,1-Trichloroethane	0.11	0.00	ממ	ug/kg	06/24/93	COMPLICHEM
PC-P1-SB7-SS03-04	573578	Chloroform	0.88	0.00	D E	ug/kg a/kg	08/24/23	COMPUCHEM
PC-P1-SB7-SS03-04	573578	Methylene chloride	5.80	0.00	Q #	ug/kg ng/kg	08/24/93	COMPUCHEM
PC-P1-SB7-SS03-04	573578	1,2-Dimethylbenzene	0.09	0.00	ם מ	18/18 19/18	08/24/93	COMPUCHEM
PC-P1-SB7-SS03-04	573578	Toluene	0.26	0.00	۵ ۵	ag/ng mg/ng	08/24/93	COMPUCHEM
PC-P1-SB7-SS03-04	573580	Zinc	4.70	0.00	۵ ۵	III K/ N K	08/24/93	COMPUCHEM
PC-P1-SB8-SS00-02	573591	1,1,1-Trichloroethane	0.13	0.00	םם	SA/Sin	08/24/93	COMPUCHEM
PC-P1-SB8-SS00-02	573591	Chloroform	0.67	0.00	ם ב	ug/kg	08/24/03	COMPUCHEM
PC-P1-SB8-SS00-02	573591	1,2-Dimethylbenzene	0.16	0.00	<u>α</u> ρ	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB8-SS00-02	573591	1,3-Dichlorobenzene	0.03	0.00	<u>α</u>	ug/ng ng/ko	08/24/93	COMPUCHEM
PC-P1-SB8-SS00-02	573591	Toluene	0.13	0.00	<b>σ</b>	mo/ko		COMPUCHEM
PC-P1-SB8-SS00-02	573593	Zinc	23.60	0.00	מ מ	110/kg		COMPUCHEM
PC-P1-SB8-SS03-04	573635	I,I,I-I richloroethane	0.33	00.0	<u> </u>	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB8-SS03-04	573635	Chlorotorm	0.69	00.0	<u> </u>	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB8-SS03-04	573635	I,3-Dichlorobenzene	0.39	00.0	<u> </u>	ue/ke	08/24/93	COMPUCHEM
PC-P1-SB8-SS03-04	573635	Toluene	0.20	00.0	, ec	me/ke	08/24/93	COMPUCHEM
PC-P1-SB8-SS03-04	573649	Zinc	2.30	00.0	<u> </u>	ne/ke		COMPUCHEM
PC-P1-SB9-SS00-02	573566	Chlorotorm	0.01	00.0	, ta	no/ko	-	COMPUCHEM
PC-P1-SB9-SS00-02	573566	Methylene chloride	4.40	0.0	a ta	110/kg	_	COMPUCHEM
PC-P1-SB9-SS00-02	573566	1,2-Dimethylbenzene	0.04	0.00	d ta	10/kg		COMPUCHEM
PC-P1-SB9-SS00-02	573566	Toluene	0.19	0.00	ם מ	mo/ko	_	COMPUCHEM
PC-P1-SB9-SS00-02	573571	Zinc	8.00 9.00	0.00	ם עם	me/ne no/ko		COMPUCHEM
PC-P1-SB9-SS03-04	573555	1,1,1-Trichloroethane	0.09	0.00	a a	110/kg		COMPUCHEM
PC-P1-SB9-SS03-04	573555	Chloroform	1.40	0.00	3	D., Q.		

COMPUCHEM 08/16/93 08/16/93 08/16/93 08/12/93 08/12/93 9/16/93 38/12/93 39/09/93 26/60/60 26/60/60 08/16/93 08/16/93 08/16/93 38/16/93 8/16/93 38/16/93 08/16/93 08/16/93 08/16/93 8/12/93 18/12/93 8/115/93 18/12/93 8/12/93 8/115/93 08/15/93 18/12/93 l/gn l/gu mg/l Mg∕l Vgn l/gn Ng∕I Mg∕l ng/l l/gn l/gn ng/l ng/l Ng/ l/gn mg/l √gn Vgn /gn l/gn Qual MIANG, Alpena CRTC, Alpena, Michigan Table J - 12 Data Points Qualified "B" 0.00 0.00 0.25 0.00 0.00 0.00 0.00 0.25 0.00 0.00 0.00 0.25 0.00 0.00 0.00 0.25 0.00 0.00 0.00 0.00 Result 0.15 3.00 0.36 1.00 Total Petroleum Hydrocarbons 1.10 Fotal Petroleum Hydrocarbons 2.30 44.30 5.00 0.21 Total Petroleum Hydrocarbons 0.40 Fotal Petroleum Hydrocarbons 0.60 Fotal Petroleum Hydrocarbons 5.60 bis(2-Ethylhexyl)phthalate bis(2-Ethylhexyl)phthalate bis(2-Ethylhexyl)phthalate bis(2-Ethylhexyl)phthalate bis(2-Ethylhexyl)phthalate Antimony, Dissolved ,3-Dichlorobenzene ,4-Dichlorobenzene Antimony, Dissolved ,2-Dichlorobenzene 1,4-Dichlorobenzene 2-Dichlorobenzene ,2-Dichlorobenzene 3-Dichlorobenzene 2-Dichlorobenzene Arsenic, Dissolved Lead, Dissolved Zinc, Dissolved Antimony **Foluene** oluene Coluene Analyte Copper Phenol 571266 571266 571278 571305 571800 571800 571793 576523 576523 76523 571268 578221 571257 571257 571280 571268 571281 571266 571277 571300 571257 571299 571314 571265 571314 571314 PC-MP2-MW6-GW4 PC-MP2-MW4-GW4 PC-MP2-MW5-GW4 PC-MP2-MW5-GW4 PC-MP2-MW5-GW4 PC-MP2-MW6-GW4 PC-MP2-MW6-GW4 PC-MP2-MW6-GW4 PC-MP2-MW6-GW4 PC-MP2-MW3-GW4 PC-MP2-MW4-GW4 PC-MP2-MW4-GW4 PC-MP2-MW4-GW4 PC-MP2-MW5-GW4 PC-MP2-MW3-GW4 PC-MP2-MW3-GW4 PC-MP2-MW3-GW4 PC-MP2-MW3-GW4 PC-MP2-MW3-GW4 PC-MP2-MW3-GW4 PC-MP2-MW4-GW4 PC-MP2-MW2-GW4 PC-MP2-MW2-GW4 PC-MP2-MW2-GW4 PC-MP2-MW2-GW4 PC-MP2-MW2-GW4 PC-MP2-MW2-GW4 PC-MP2-MW2-GW4 PC-MP2-MW2-GW4

PC-MP2-MW7-GW4         576505         Methylene chloride         0.42         0.00         B         ug/I         0909933         COMPU           PC-MP2-MW7-GW4         576505         1,4-Dichlorobenzene         0.17         0.00         B         ug/I         0909933         COMPU           PC-MP2-MW7-GW4         576505         1,4-Dichlorobenzene         0.17         0.00         B         ug/I         0909933         COMPU           PC-MP2-MW7-GW4         576507         Di-n-tunyl phthalate         1.00         0.00         B         ug/I         0909933         COMPU           PC-MP2-MW7-GW4         576507         Di-n-tunyl phthalate         1.00         0.00         B         ug/I         0909933         COMPU           PC-MP2-MW7-GW4         571262         Toluene         0.20         0.00         B         ug/I         0909933         COMPU           PC-MP2-MW7-GW4         571262         Toluene         0.00         0.00         B         ug/I         0909933         COMPU           PC-MP2-MW9-GW4         571212         Arsenic, Dissolved         6.10         0.00         B         ug/I         0.00         D         D         0.00         D         D         D         0.00	Lab No	Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan Analyte Result RDL	Oata Points C CRTC, Alp Result	valified "B" ena, Michigan RDL	Qual	Units	Date	Laboratory
1,2-Dichlorobenzene         0.17         0.00         B         ug/I         09/09/93         C           1,4-Dichlorobenzene         0.30         0.00         B         ug/I         09/09/93         C           1,4-Dichlorobenzene         0.30         0.00         B         ug/I         09/09/93         C           Di-n-butyl phthalate         1.00         0.00         B         ug/I         09/09/93         C           Dis-n-butyl phthalate         0.26         0.00         B         ug/I         09/09/93         C           Toluene         0.26         0.00         B         ug/I         08/16/93         C           Copper         4.50         0.00         B         ug/I         08/16/93         C           Copper         4.50         0.00         B         ug/I         08/16/93         C           Copper         4.50         0.00         B         ug/R         08/16/93         C           Chloroform         0.30         0.00         B         ug/R         09/13/93         C           Chloroform         0.11         0.00         B         ug/R         09/13/93         C           Toluene         0.12	576505	Methylene chloride	0.42	0.00	В	l/gu	69/60/60	COMPUCHEM
14-Dichlorobenzene	576505	1,2-Dichlorobenzene	0.17	0.00	В	ng/l	09/09/93	COMPUCHEM
Selenium         3.20         0.00         OB         ug/I         09/09/93         C           bis(2-Ethylhexyl)phthalate         1.00         0.00         B         ug/I         09/09/93         C           Toluene         0.26         0.00         B         ug/I         09/09/93         C           Arsenic, Dissolved         6.16         0.00         OB         ug/I         08/16/93         C           Arsenic, Dissolved         6.10         0.00         OB         ug/I         08/16/93         C           Copper         4.50         0.00         OB         ug/I         08/16/93         C           Chloroform         0.19         0.00         B         ug/R         09/13/93         C           Chloroform         0.19         0.00         B         ug/R         09/13/93         C           Chloroform         0.15         0.00         B         ug/R         09/13/93         C           Toluene         0.15         0.00         B         ug/R         09/13/93         C           Toluene         0.11         0.00         B         ug/R         09/13/93         C           Toluene         0.11         0.00 <td>576505</td> <td>1,4-Dichlorobenzene</td> <td>0.30</td> <td>0.00</td> <td>Ω</td> <td>/gn</td> <td>09/09/93</td> <td>COMPUCHEM</td>	576505	1,4-Dichlorobenzene	0.30	0.00	Ω	/gn	09/09/93	COMPUCHEM
Di-n-butyl phthalate         1.00         0.00         B         ug/l         09/09/93         C           Pis(2-Ethylhexyl)phthalate         3.00         0.00         B         ug/l         09/09/93         C           Toluene         0.26         0.00         B         ug/l         08/16/93         C           Copper         4.50         0.00         OB         ug/l         08/16/93         C           Copper         4.50         0.00         OB         ug/l         08/16/93         C           Choroform         0.10         0.00         B         ug/l         08/16/93         C           Chloroform         0.10         0.00         B         ug/k         09/13/93         C           Chloroform         0.30         0.00         B         ug/k         09/13/93         C           Chloroform         0.15         0.00         B         ug/k         09/13/93         C           Chloroform         0.15         0.00         B         ug/k         09/13/93         C           Toluene         0.11         0.00         B         ug/k         09/13/93         C           Toluene         0.14         0.00	576509	Selenium	3.20	0.00	()B	/Sn	09/09/93	COMPUCHEM
bis(2-Ethylhexyl)phthalate 3.00 0.00 B ug/l 09/09/93 C Toluene 0.26 0.00 B ug/l 08/16/93 C C Copper 4.50 0.00 B ug/l 08/16/93 C C Copper 4.50 0.00 B ug/l 08/16/93 C C Copper 7.00 0.00 B ug/l 08/16/93 C C L C C C C C C 0.00 B ug/l 08/16/93 C C C C C C C 0.00 B ug/l 08/16/93 C C C C C C C C 0.00 B ug/l 08/16/93 C C C C C C C C C C C C C C C C C C C	576507	Di-n-butyl phthalate	1.00	0.00	8	/gn	09/09/93	COMPUCHEM
Toluene         0.26         0.00         B         ug/I         08/16/93           Arsenic, Dissolved         6.10         0.00         (DB         ug/I         08/16/93           Copper         4.50         0.00         (DB         ug/I         08/16/93           Copper         4.50         0.00         (DB         ug/I         08/16/93           Chloroform         0.19         0.00         (DB         ug/Kg         09/13/93           Chloroform         0.30         0.00         (DB         ug/Kg         09/13/93           Chloroform         0.15         0.00         (DB         ug/Kg         09/13/93           Chloroform         0.31         0.00         (DB         ug/Kg         09/13/93           Chloroform         0.31         0.00         (DB         ug/Kg         09/13/93           I J,2-Dimethylenzene         0.14         0.00         (DB         ug/Kg         09/13/93           I J,4-Dichlorobenzene         0.11         0.00         (DB         ug/Kg         09/13/93           I J,1-Trichloroethane         0.17         0.00         (DB         ug/Kg         09/13/93           Sinc         1.1,1-Trichloroethane         0.36 <td>576507</td> <td>bis(2-Ethylhexyl)phthalate</td> <td>3.00</td> <td>0.00</td> <td>8</td> <td>ng∕l</td> <td>09/09/93</td> <td>COMPUCHEM</td>	576507	bis(2-Ethylhexyl)phthalate	3.00	0.00	8	ng∕l	09/09/93	COMPUCHEM
Arsenic, Dissolved         6.10         0.00         ()B         ug/l         08/16/93           Copper         4.50         0.00         ()B         ug/l         08/16/93         Copper           Copper         4.50         0.00         ()B         ug/l         08/16/93         COloroform           Chloroform         3.80         0.00         B         ug/kg         09/13/93         COloroform           Chloroform         0.30         0.00         B         ug/kg         09/13/93         COloroform           Chloroform         0.31         0.00         B         ug/kg         09/13/93         COloroform           Hethylene chloride         0.15         0.00         B         ug/kg         09/13/93         COloroform           Hethylene chloride         0.14         0.00         B         ug/kg         09/13/93         COloroform           Hethylene chloride         0.14         0.00         B         ug/kg         09/13/93         COloroform           Toluene         0.14         0.00         B         ug/kg         09/13/93         COloroform         B         ug/kg         09/13/93         COloroform         B         ug/kg         09/13/93         COloroform	571262	Toluene	0.26	0.00	В	√gn	08/16/93	COMPUCHEM
Copper         4.50         0.00         OB         ug/l b         08/16/93         C           Chloroform         0.19         0.00         B         ug/kg         09/13/93         C           Chloroform         0.19         0.00         B         ug/kg         09/13/93         C           Chloroform         0.30         0.00         B         ug/kg         09/13/93         C           Chloroform         0.30         0.00         B         ug/kg         09/13/93         C           Chloroform         0.15         0.00         B         ug/kg         09/13/93         C           Chloroform         0.11         0.00         B         ug/kg         09/13/93         C           1 JDimethylenzene         0.17         0.00         B         ug/kg         09/13/93         C           2 Li,1-Trichloroethane	571312	Arsenic, Dissolved	6.10	0.00	()B	Vgn	08/16/93	COMPUCHEM
bis(2-Ethylhexyl)phthalate         7.00         0.00         B         ug/k         08/16/93         C           Chloroform         0.19         0.00         B         ug/kg         09/13/93         C           Chloroform         0.30         0.00         B         ug/kg         09/13/93         C           Chloroform         0.30         0.00         B         ug/kg         09/13/93         C           Chloroform         0.15         0.00         B         ug/kg         09/13/93         C           Choroform         0.15         0.00         B         ug/kg         09/13/93         C           I.2-Dimethylbenzene         0.14         0.00         B         ug/kg         09/13/93         C           I.3-Dimethylbenzene         0.11         0.00         B         ug/kg         09/13/93         C           I.4-Dichlorobenzene         0.11         0.00         B         ug/kg         09/13/93         C           I.1,1-Trichlorochane         0.36         0.00         B         ug/kg         08/17/93         C           Arsenic         1.30         0.00         B         ug/kg         08/17/93         C           I.1,1-Trichloroch	571293	Copper	4.50	0.00	()B	Vgn	08/16/93	COMPUCHEM
Chloroform         0.19         0.00         B         ug/kg         09/13/93         C           Chloroform         3.80         0.00         B         ug/kg         09/13/93         C           Chloroform         0.30         0.00         B         ug/kg         09/13/93         C           Chloroform         0.15         0.00         B         ug/kg         09/13/93         C           Chloroform         0.15         0.00         B         ug/kg         09/13/93         C           Chloroform         0.31         0.00         B         ug/kg         09/13/93         C           Li,2-Dimethylbenzene         0.14         0.00         B         ug/kg         09/13/93         C           Li,4-Dichlorobenzene         0.11         0.00         B         ug/kg         09/13/93         C           Li,4-Dichlorobenzene         0.11         0.00         B         ug/kg         09/13/93         C           Toluene         0.17         0.00         B         ug/kg         09/13/93         C           Li,1-Trichloroethane         0.36         0.00         B         ug/kg         08/17/93           Zinc         1,1,1-Trichloroethane <td>571273</td> <td>bis(2-Ethylhexyl)phthalate</td> <td>7.00</td> <td>0.00</td> <td>В</td> <td>/gn</td> <td>08/16/93</td> <td>COMPUCHEM</td>	571273	bis(2-Ethylhexyl)phthalate	7.00	0.00	В	/gn	08/16/93	COMPUCHEM
Methylene chloride         3.80         0.00         B         ug/kg         09/13/93         C           Chloroform         0.30         0.00         B         ug/kg         09/13/93         C           Chloroform         5.20         0.00         B         ug/kg         09/13/93         C           Toluene         0.15         0.00         B         ug/kg         09/13/93         C           Chloroform         0.31         0.00         B         ug/kg         09/13/93         C           1,2-Dimethylbenzene         0.14         0.00         B         ug/kg         09/13/93         C           1,2-Dimethylbenzene         0.11         0.00         B         ug/kg         09/13/93         C           1,2-Dimethylbenzene         0.11         0.00         B         ug/kg         09/13/93         C           1,4-Dichlorobenzene         0.11         0.00         B         ug/kg         09/13/93         C           1,1,1-Trichlorocthane         0.36         0.00         B         ug/kg         08/17/93         C           Zinc         1,1,1-Trichlorocthane         0.38         0.00         B         ug/kg         08/17/93 <td< td=""><td>577028</td><td>Chloroform</td><td>0.19</td><td>0.00</td><td>В</td><td>ug/kg</td><td>09/13/93</td><td>COMPUCHEM</td></td<>	577028	Chloroform	0.19	0.00	В	ug/kg	09/13/93	COMPUCHEM
Chloroform         0.30         0.00         B         ug/kg         09/13/93         C           Methylene chloride         5.20         0.00         B         ug/kg         09/13/93         C           Toluene         0.15         0.00         B         ug/kg         09/13/93         C           Chloroform         0.31         0.00         B         ug/kg         09/13/93         C           L,2-Dimethylbenzene         0.14         0.00         B         ug/kg         09/13/93         C           1,2-Dimethylbenzene         0.11         0.00         B         ug/kg         09/13/93         C           1,4-Dichlorobenzene         0.11         0.00         B         ug/kg         09/13/93         C           Toluene         0.17         0.00         B         ug/kg         09/13/93         C           Li,1-Trichloroethane         0.36         0.00         B         ug/kg         08/17/93         C           Arsenic         13.00         0.00         B         ug/kg         08/17/93         C           Chloroform         0.31         0.00         B         ug/kg         08/17/93         C           Li,1,1-Trichloroethane	577028	Methylene chloride	3.80	0.00	В	ug/kg	09/13/93	COMPUCHEM
Methylene chloride         5.20         0.00         B         ug/kg         09/13/93         C           Toluene         0.15         0.00         B         ug/kg         09/13/93         C           Chloroform         0.31         0.00         B         ug/kg         09/13/93         C           Chloroform         0.14         0.00         B         ug/kg         09/13/93         C           1,2-Dimethylbenzene         0.14         0.00         B         ug/kg         09/13/93         C           1,4-Dichlorobenzene         0.11         0.00         B         ug/kg         09/13/93         C           Toluene         0.17         0.00         B         ug/kg         09/13/93         C           Li,1,Trichlorocthane         0.36         0.00         B         ug/kg         08/17/93         C           Arsenic         13.00         0.00         B         ug/kg         08/17/93         C           Li,1,Trichlorocthane         0.38         0.00         B         ug/kg         08/17/93         C           Chloroform         0.31         0.00         B         ug/kg         08/17/93         C           Li,1,1-Trichlorocthane	577029	Chloroform	0.30	0.00	В	ug/kg	09/13/93	COMPUCHEM
Toluene         0.15         0.00         B         ug/kg         09/13/93         C           Chloroform         0.31         0.00         B         ug/kg         09/13/93         C           Methylene chloride         4.10         0.00         B         ug/kg         09/13/93         C           1,2-Dimethylbenzene         0.14         0.00         B         ug/kg         09/13/93         C           1,4-Dichlorobenzene         0.11         0.00         B         ug/kg         09/13/93         C           1,1-Trichlorochane         0.17         0.00         B         ug/kg         09/13/93         C           Chloroform         0.56         0.00         B         ug/kg         08/17/93         C           Arsenic         1.3.00         0.00         B         ug/kg         08/17/93         C           Zinc         1.3.1-Trichlorocthane         0.38         0.00         B         ug/kg         08/17/93           Chloroform         0.38         0.00         B         ug/kg         08/17/93           Chloroform         0.31         0.00         B         ug/kg         08/17/93           Arsenic         0.48         0.00	577029	Methylene chloride	5.20	0.00	В	ug/kg	09/13/93	COMPUCHEM
Chloroform         0.31         0.00         B         ug/kg         09/13/93         C           Methylene chloride         4.10         0.00         B         ug/kg         09/13/93         C           1,2-Dimethylbenzene         0.14         0.00         B         ug/kg         09/13/93         C           1,4-Dichlorobenzene         0.11         0.00         B         ug/kg         09/13/93         C           Toluene         0.17         0.00         B         ug/kg         09/13/93         C           Li,1-Trichloroethane         0.36         0.00         B         ug/kg         08/17/93         C           Arsenic         13.00         0.00         B         ug/kg         08/17/93         C           Zinc         11,1-Trichloroethane         0.38         0.00         B         ug/kg         08/17/93         C           Chloroform         0.38         0.00         B         ug/kg         08/17/93         C           Li,1,1-Trichloroethane         0.38         0.00         B         ug/kg         08/17/93         C           Chloroform         0.31         0.00         B         ug/kg         08/17/93         C	577029	Toluene	0.15	0.00	Ω	ug/kg	09/13/93	COMPUCHEM
Methylene chloride         4.10         0.00         B         ug/kg         09/13/93         C           1,2-Dimethylbenzene         0.14         0.00         B         ug/kg         09/13/93         C           1,4-Dichlorobenzene         0.11         0.00         B         ug/kg         09/13/93         C           Toluene         0.17         0.00         B         ug/kg         09/13/93         C           1,1,1-Trichloroethane         0.36         0.00         B         ug/kg         08/17/93         C           Chloroform         0.56         0.00         B         ug/kg         08/17/93         C           Arsenic         2.20         0.00         B         ug/kg         08/17/93         C           1,1,1-Trichloroethane         0.38         0.00         B         ug/kg         08/17/93         C           Chloroform         0.31         0.00         B         ug/kg         08/17/93         C           Arsenic         0.48         0.00         B         ug/kg         08/17/93         C           Arsenic         0.48         0.00         B         mg/kg         08/17/93         C           Arsenic         4.50	577024	Chloroform	0.31	0.00	В	ug/kg	09/13/93	COMPUCHEM
1,2-Dimethylbenzene         0.14         0.00         B         ug/kg         09/13/93         C           1,4-Dichlorobenzene         0.11         0.00         B         ug/kg         09/13/93         C           Toluene         0.17         0.00         B         ug/kg         09/13/93         C           Chloroform         0.36         0.00         B         ug/kg         08/17/93         C           Chloroform         7.20         0.00         B         ug/kg         08/17/93         C           Arsenic         13.00         0.00         B         ug/kg         08/17/93         C           Li,1,1-Trichloroethane         0.38         0.00         B         ug/kg         08/17/93         C           Chloroform         0.31         0.00         B         ug/kg         08/17/93         C           Arsenic         3.20         0.00         B         ug/kg         08/17/93         C           Arsenic         4.50         0.00         B         mg/kg         08/17/93         C           Arsenic         B         ug/kg         08/17/93         C         D         D         D         D         D         D <t< td=""><td>577024</td><td>Methylene chloride</td><td>4.10</td><td>00.0</td><td>æ</td><td>ug/kg</td><td>09/13/93</td><td>COMPUCHEM</td></t<>	577024	Methylene chloride	4.10	00.0	æ	ug/kg	09/13/93	COMPUCHEM
1,4-Dichlorobenzene         0.11         0.00         B         ug/kg         09/13/93         C           Toluene         0.17         0.00         B         ug/kg         09/13/93         C           1,1,1-Trichloroethane         0.36         0.00         B         ug/kg         08/17/93         C           Chloroform         7.20         0.00         B         ug/kg         08/17/93         C           Arsenic         0.58         0.00         0B         mg/kg         08/17/93         C           Zinc         13.00         0.00         B         ug/kg         08/17/93         C           Chloroform         0.31         0.00         B         ug/kg         08/17/93         C           Arsenic         3.20         0.00         B         ug/kg         08/17/93         C           Arsenic         4.50         0.00         B         mg/kg         08/17/93         C           Arsenic         4.50         0.00         B         mg/kg         08/17/93         C	577024	1,2-Dimethylbenzene	0.14	00.0	Ф	ug/kg	09/13/93	COMPUCHEM
Toluene         0.17         0.00         B         ug/kg         09/13/93         C           1,1,1-Trichloroethane         0.36         0.00         B         ug/kg         08/17/93         C           Chloroform         0.56         0.00         B         ug/kg         08/17/93         C           Arsenic         0.58         0.00         D         B         ug/kg         08/17/93         C           Zinc         13.00         0.00         B         ug/kg         08/17/93         C           Chloroform         0.31         0.00         B         ug/kg         08/17/93         C           Arsenic         3.20         0.00         B         ug/kg         08/17/93         C           Arsenic         4.50         0.00         B         mg/kg         08/17/93         C           Zinc         0.00         B         mg/kg         08/17/93         C         D	577024	1,4-Dichlorobenzene	0.11	0.00	B	ug/kg	09/13/93	COMPUCHEM
1,1,1-Trichloroethane         0.36         0.00         B         ug/kg         08/17/93           Chloroform         0.56         0.00         B         ug/kg         08/17/93           Arsenic         7.20         0.00         B         ug/kg         08/17/93           Arsenic         0.58         0.00         B         mg/kg         08/17/93           Zinc         13.00         0.00         B         ug/kg         08/17/93           Chloroform         0.31         0.00         B         ug/kg         08/17/93           Methylene chloride         3.20         0.00         B         ug/kg         08/17/93           Arsenic         4.50         0.00         B         mg/kg         08/17/93           Zinc         4.50         0.00         B         mg/kg         08/17/93	577024	Toluene	0.17	00.0	B	ug/kg	09/13/93	COMPUCHEM
Chloroform         0.56         0.00         B         ug/kg         08/17/93           Methylene chloride         7.20         0.00         B         ug/kg         08/17/93           Arsenic         0.58         0.00         B         mg/kg         08/17/93           Zinc         13.00         0.00         B         mg/kg         08/17/93           Chloroform         0.31         0.00         B         ug/kg         08/17/93           Methylene chloride         3.20         0.00         B         ug/kg         08/17/93           Arsenic         4.50         0.00         B         mg/kg         08/17/93           Zinc         4.50         0.00         B         mg/kg         08/17/93	571978	1,1,1-Trichloroethane	0.36	0.00	B	ug/kg	08/17/93	COMPUCHEM
Methylene chloride         7.20         0.00         B         ug/kg         08/17/93           Arsenic         0.58         0.00         0B         mg/kg         08/17/93           Zinc         13.00         0.00         B         mg/kg         08/17/93           1,1,1-Trichloroethane         0.38         0.00         B         ug/kg         08/17/93           Chloroform         0.31         0.00         B         ug/kg         08/17/93           Arsenic         0.48         0.00         ()B         mg/kg         08/17/93           Zinc         4.50         0.00         B         mg/kg         08/17/93	571978	Chloroform	0.56	00'0	B	ug/kg	08/17/93	COMPUCHEM
Arsenic         0.58         0.00         ()B         mg/kg         08/17/93           Zinc         13.00         0.00         B         mg/kg         08/17/93           1,1,1-Trichloroethane         0.38         0.00         B         ug/kg         08/17/93           Chloroform         0.31         0.00         B         ug/kg         08/17/93           Arsenic         0.48         0.00         ()B         mg/kg         08/17/93           Zinc         4.50         0.00         B         mg/kg         08/17/93	571978	Methylene chloride	7.20	0.00	В	ug/kg	08/17/93	COMPUCHEM
Zinc         13.00         0.00         B         mg/kg         08/17/93           1,1,1-Trichloroethane         0.38         0.00         B         ug/kg         08/17/93           Chloroform         0.31         0.00         B         ug/kg         08/17/93           Methylene chloride         3.20         0.00         B         ug/kg         08/17/93           Arsenic         4.50         0.00         B         mg/kg         08/17/93	572052	Arsenic	0.58	0.00	()B	mg/kg	_	COMPUCHEM
1,1,1-Trichloroethane         0.38         0.00         B         ug/kg         08/17/93           Chloroform         0.31         0.00         B         ug/kg         08/17/93           Methylene chloride         3.20         0.00         B         ug/kg         08/17/93           Arsenic         0.48         0.00         B         mg/kg         08/17/93           Zinc         4.50         0.00         B         mg/kg         08/17/93	572052	Zinc	13.00	0.00	B	mg/kg		COMPUCHEM
Chloroform         0.31         0.00         B         ug/kg         08/17/93           Methylene chloride         3.20         0.00         B         ug/kg         08/17/93           Arsenic         0.48         0.00         ()B         mg/kg         08/17/93           Zinc         4.50         0.00         B         mg/kg         08/17/93	571975	1,1,1-Trichloroethane	0.38	0.00	В	ug/kg	08/17/93	COMPUCHEM
Methylene chloride         3.20         0.00         B         ug/kg         08/17/93           Arsenic         0.48         0.00         ()B         mg/kg         08/17/93           Zinc         4.50         0.00         B         mg/kg         08/17/93	571975	Chloroform	0.31	0.00	æ	ug/kg	_	COMPUCHEM
Arsenic 0.48 0.00 ()B mg/kg 08/17/93 Zinc 4.50 0.00 B mg/kg 08/17/93	571975	Methylene chloride	3.20	0.00	Ø	ug/kg	_	COMPUCHEM
Zinc 4.50 0.00 B mg/kg 08/17/93	572038	Arsenic	0.48	0.00	OB)	mg/kg		COMPUCHEM
	572038	Zinc	4.50	0.00	В	mg/kg		COMPUCHEM

		Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan	Data Points C CRTC, Alp	ualified "B" ena, Michigan	•	; ;	į	Inhoratory
Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Labolatory
נו ממשט במש במער במ	571982	Chloroform	0.30	0.00	В	ug/kg	08/11/93	COMPUCHEM
PC-MP2-5B3-5500-02	70/1/6	Mathematical of the state of th	3 80	000	8	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB3-SS00-02	286175	Methylene chiolide	04.0	00.0	OB	me/ke	08/17/93	COMPUCHEM
PC-MP2-SB3-SS00-02	572067	Arsenic	0.49	0.00	) ¤	2 / Cu	08/17/93	COMPUCHEM
PC-MP2-SB3-SS00-02	572067	Zinc	5.50	0.00	ם ם	34/2m	08/17/93	COMPUCHEM
PC-MP2-SB3-SS04-05	571977	1,1,1-Trichloroethane	0.50	0.00	ם ב	ug/kg	08/17/93	COMPLICHEM
PC-MP2-SB3-SS04-05	571977	Chloroform	0.31	0.00	<u> </u>	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB3-SS04-05	571977	Methylene chloride	1.40	0.00	a C	ma/ka	08/17/93	COMPUCHEM
PC-MP2-SB3-SS04-05	572046	Arsenic	0.60	0.00	<u>a</u>	mg/ng mg/kg	08/17/93	COMPUCHEM
PC-MP2-SB3-SS04-05	572046	Zinc	5.50	0.00	ם מ	no/ko	08/17/93	COMPUCHEM
PC-MP2-SB3-SS05-07	571979	1,1,1-Trichloroethane	0.58	0.00	ם מ	10/kg	08/17/93	COMPUCHEM
PC-MP2-SB3-SS05-07	571979	Chloroform	0.47	0.00	ם ב	24/8n	08/17/03	COMPLICHEM
PC-MP2-SB3-SS05-07	571979	Methylene chloride	1.40	0.00	מַ	ug/kg		COMPLICHEM
PC-MP2-SB3-SS05-07	572056	Arsenic	0.49	0.00	<u>a</u> (	mg/kg		COMPLICHEM
PC-MP2-SB3-SS05-07	572056	Zinc	2.90	0.00	<b>2</b> 0 (	mg/kg		COMPLICHEM
PC-MP2-SB4-SS00-02	571974	1,1,1-Trichloroethane	0.41	0.00	<b>x</b> 1	ug/kg	08/17/93	COMPLICHEM
PC-MP7-SR4-SS00-02	571974	Chloroform	0.32	0.00	<b>2</b> 0 1	ug/kg	08/17/93	COMPLICITION
PC-MP2-SB4-SS00-02	571974	Methylene chloride	2.40	0.00	<b>a</b> (	ug/kg		COMPLICHEM
pc-MP2-SB4-SS00-02	572028	Arsenic	68.0	0.00	90	mg/kg	08/17/93	COMPLICHEM
PC-MP2-SB4-SS00-02	572028	Zinc	06.9	0.00	<b>2</b> 0 f	mg/kg		COMPLICHEM
PC-MP2-SB4-SS03-04	571328	Chloroform	0.90	0.00	<b>2</b> 1	ug/kg	06/14/93	COMPLICHEM
PC-MP2-SB4-SS03-04	571328	Methylene chloride	3.00	0.00	מנ	ug/kg		COMPLICHEM
PC-MP2-SB4-SS03-04	571328	Toluene	0.53	0.00	a 6	ng/kg me/je		COMPUCHEM
PC-MP2-SB4-SS03-04	571371	Arsenic	0.79	0.00	9 6	III K/ NK		COMPLICHEM
PC-MP2-SB4-SS03-04	571371	Lead	1.00	0.00	מב	mg/kg		COMPLICHEM
PC-MP2-SB4-SS03-04	571371	Zinc	13.50	0.00	n s	mg/kg		COMPLICHEM
PC-MP2-SB4-SS04-05	571983	Chloroform	0.32	0.00	<b>2</b> 0 #	ug/kg		COMPLICHEM
PC-MP2-SB4-SS04-05	571983	Methylene chloride	4.70	0.00	ים ב	ug/kg	06/17/93	COMPLICHEM
PC-MP2-SB4-SS04-05	572083	Zinc	00.9	0.00	<b>1</b> 0 (	mg/kg		COMPLICHEM
PC-MP2-SB5-SS00-02	571981	1,1,1-Trichloroethane	0.34	0.00	m t	ug/kg		COMPLICHEM
PC-MP2-SB5-SS00-02	571981	Chloroform	0.41	0.00	<b>x</b>	ug/kg	_	COINT

	;	2	Table J - 12 Data Points Qualified "B" IIANG, Alpena CRTC, Alpena, Michiga	Qualified "B" ena, Michigan	•	:		•
Sampleid	Lab No	Analyte	Result	RDL	Onal	Units	Date	Laboratory
PC-MP2-SB5-SS00-02	571981	Methylene chloride	2.70	0.00	В	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB5-SS00-02	572064	Arsenic	89.0	0.00	()B	mg/kg	08/17/93	COMPUCHEM
PC-MP2-SB5-SS00-02	572064	Zinc	8.50	0.00	В	mg/kg	08/17/93	COMPUCHEM
PC-MP2-SB5-SS04-05	571976	1,1,1-Trichloroethane	0.40	0.00	В	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB5-SS04-05	571976	Chloroform	0.32	0.00	Ф	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB5-SS04-05	571976	Methylene chloride	1.70	0.00	В	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB5-SS04-05	571976	1,3-Dichlorobenzene	0.31	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB5-SS04-05	572043	Arsenic	0.41	0.00	()B	mg/kg	08/17/93	COMPUCHEM
PC-MP2-SB5-SS04-05	572043	Zinc	3.50	0.00	B	mg/kg	08/17/93	COMPUCHEM
PC-MP2-SB6-SS00-02	571316	Chloroform	0.55	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB6-SS00-02	571316	1,4-Dichlorobenzene	0.26	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB6-SS00-02	571316	Toluene	0.28	0.00	Ω	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB6-SS00-02	571341	Arsenic	1.90	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB6-SS00-02	571341	Zinc	20.30	0.00	В	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB6-SS05-06	571334	Chloroform	0.37	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB6-SS05-06	571334	Methylene chloride	7.60	0.00	В	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB6-SS05-06	571334	1,4-Dichlorobenzene	0.62	0.00	Ф	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB6-SS05-06	571334	Toluene	69.0	0.00	В	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB6-SS05-06	571395	Arsenic	0.61	0.00	()B	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB6-SS05-06	571395	Lead	0.94	0.00	В	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB6-SS05-06	571395	Zinc	6.70	0.00	В	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB7-SS00-02	571323	1,1,1-Trichloroethane	0.22	0.00	В	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB7-SS00-02	571323	Chloroform	0.58	0.00	В	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB7-SS00-02	571323	Methylene chloride	4.40	0.00	В	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB7-SS00-02	571323	Toluene	0.23	00.0	20	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB7-SS00-02	571356	Arsenic	69'0	0.00	(B)	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB7-SS00-02	571356	Lead	1.40	0.00	m	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB7-SS00-02	571356	Zinc	9.50	00'0	B	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB7-SS05-06	571333	Chloroform	0.54	00.0	B	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB7-SS05-06	571333	Methylene chloride	2.60	0.00	В	ug/kg	08/15/93	СОМРИСНЕМ

		Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan	Data Points ( a CRTC, Alp	Qualified "B" nena, Michigan	-		j	- shorestore
Sampleid	Lab No	Analyte	Result	RDL	Qual	Onits	Date	Laboratory
20 3000 500 0000 500	571333	Toluene	0.25	0.00	В	ug/kg	08/15/93	COMPUCHEM
PC-MP2-5B/-5503-00	50133		0.71	0.00	()B	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB7-SS05-06	5/1391	Arsenic	1.0	000	e CC	mo/ke	08/15/93	COMPUCHEM
PC-MP2-SB7-SS05-06	571391	Lead	1.10	0.00	ם ב	0. Vom	08/15/93	COMPUCHEM
PC-MP2-SB7-SS05-06	571391	Zinc	9.60	0.00	ם ב	III KING	08/15/03	COMPLICHEM
PC-MP2-SB8-SS00-02	571332	1,1,1-Trichloroethane	0.20	0.00	ממ	ug/kg	00/17/2	COMPLICHEM
PC-MP2-SB8-SS00-02	571332	Chloroform	0.97	0.00	za t	ug/kg	08/13/93	COMPLICHEM
PC-MP2-SB8-SS00-02	571332	Methylene chloride	1.30	0.00	χΩ f	ug/kg	08/13/93	COMPLICHEM
PC-MP2-SB8-SS00-02	571332	Toluene	0.54	0.00	Σ	ug/kg	08/13/93	COMPLICHEM
PC-MP2-SB8-SS00-02	571387	Arsenic	2.50	0.00	ם	mg/kg		COMPLICHEM
PC-MP2-SB8-SS00-02	571387	Lead	11.80	0.00	םנ	III B/ KB		COMPLICHEM
PC-MP2-SB8-SS00-02	571387	Zinc	21.70	0.00	Þι	E S/Kg	06/13/93	COMPLICHEM
PC-MP2-SB8-SS05-06	571331	Chloroform	0.59	0.00	Σt	ng/kg	08/13/93	COMPLICHEM
DC-MP2-SR8-SS05-06	571331	Methylene chloride	1.40	0.00	<b>x</b>	ug/kg	08/13/93	COMPLICHEM
PC-MP7-SB8-SS05-06	571331	1,4-Dichlorobenzene	0.46	0.00	<b>m</b> 1	ug/kg	08/12/93	COMPOCHEM
PC-MP2-SB8-SS05-06	571331	Toluene	0.18	0.00	<b>m</b> ;	ug/kg		COMPLICHEM
PC-MP2-CR8-SS05-06	571383	Arsenic	0.58	0.00	9 ()	mg/kg	_	COMPLICHEM
PC-MP2-SB8-SS05-00	571383	Lead	2.50	0.00	m i	mg/kg		COMPUCHEM
D_MP2-SB8-SS05-06	571383	Zinc	10.00	0.00	<b>m</b> 1	mg/kg	_	COMPLICHEM
FC-IVII 2-3D3-353-55	\$71695	1.1.1-Trichloroethane	0.05	0.00	മ	ng/kg	08/16/93	COMPOCHEM
PC-IMF2-3B9-3303-04	571695	Chloroform	0.57	0.00	B	ug/kg	08/16/93	COMPUCHEM
pc_Mp2_SB9-SS03-04	571695	Methylene chloride	5.70	0.00	æ <sup>(</sup>	ug/kg	_	COMPLCHEM
PC-MP2-SB9-SS03-04	571697	Arsenic	0.62	0.00	9 ()	mg/kg	08/10/93	COMPLICHEM
PC-MP2-SB9-SS03-04	571697	Lead	0.84	0.00	ים ב	mg/kg		COMPLICHEM
PC-MP2-SB9-SS03-04	571697	Zinc	5.40	0.00	<b>1</b> 20 1	mg/kg		COMICCIEM
F C-1011 2-2012 5:	871678	Chloroform	0.63	0.00	m	ug/kg		COMFOCUEIN
PC-IMP2-559-5504-00	871678	Methylene chloride	2.00	0.00	B	ug/kg	_	COMPUCHEM
FC-MF2-505-5504-06	571680	Arcenic	0.57	0.00	()B	mg/kg		COMPOCHEM
FC-MF2-5B9-5504-00	571680	Lead	1.00	0.00	B	mg/kg	_	COMPUCHEM
PC-MP2-SB9-SS04-00	571680	Zinc	4.60	00.0	B	mg/kg	_	COMPUCHEM
PC-MP2-SB9-SS04-00 PC-CG3-MW1-GW4	571259	1,3-Dichlorobenzene	0.14	0.00	В	/gn	08/15/93	COMPUCHEM

		Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan	Data Points (	Qualified "B" pena, Michigan				
Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-CG3-MW1-GW4	571259	Toluene	0.19	0.00	B	l/gu	08/15/93	COMPUCHEM
PC-CG3-MW1-GW4	571270	bis(2-Ethylhexyl)phthalate	06.0	0.00	B	l/gn	08/15/93	COMPUCHEM
PC-CG3-MW1-GW4	571285	Total Petroleum Hydrocarbons 1.80	ns1.80	0.25	æ	mg/l	08/15/93	COMPUCHEM
PC-CG3-MW2-GW4	574047	Methylene chloride	0.13	0.00	В	ng/l	08/25/93	COMPUCHEM
PC-CG3-MW2-GW4	574047	1,2-Dichlorobenzene	1.80	0.00	В	l/gn	08/25/93	COMPUCHEM
PC-CG3-MW2-GW4	574047	Toluene	0.11	0.00	B	l/gn	08/25/93	COMPUCHEM
PC-CG3-MW2-GW4	574069	Zinc, Dissolved	12.70	0.00	()B	l/gu	08/25/93	COMPUCHEM
PC-CG3-MW2-GW4	574055	bis(2-Ethylhexyl)phthalate	3.00	0.00	В	l/gu	08/25/93	COMPUCHEM
PC-CG3-MW2-GW4	574068	Total Petroleum Hydrocarbons 0.90	ns0.90	0.25	B	mg/l	08/25/93	COMPUCHEM
PC-CG3-MW3-GW4	574048	Methylene chloride	0.27	0.00	В	ng/l	08/25/93	COMPUCHEM
PC-CG3-MW3-GW4	574048	1,2-Dichlorobenzene	0.31	0.00	B	l/gn	08/25/93	COMPUCHEM
PC-CG3-MW3-GW4	574048	Toluene	80.0	0.00	B	l/gn	08/25/93	COMPUCHEM
PC-CG3-MW3-GW4	574061	Copper	5.30	0.00	()B	ng/l	08/25/93	COMPUCHEM
PC-CG3-MW3-GW4	574061	Zinc	18.50	0.00	()B	l/gn	08/25/93	COMPUCHEM
PC-CG3-MW3-GW4	574071	Zinc, Dissolved	5.00	0.00	()B	//gn	08/25/93	COMPUCHEM
PC-CG3-MW3-GW4	574056	Phenol	1.00	0.00	B	l/gn	08/25/93	COMPUCHEM
PC-CG3-MW3-GW4	574056	bis(2-Ethylhexyl)phthalate	2.00	0.00	В	//gn	08/25/93	COMPUCHEM
PC-CG3-MW4-GW4	574049	Methylene chloride	0.43	0.00	В	l/gn	08/25/93	COMPUCHEM
PC-CG3-MW4-GW4	574049	1,2-Dichlorobenzene	0.25	0.00	В	l/gn	08/25/93	COMPUCHEM
PC-CG3-MW4-GW4	574049	Toluene	0.15	0.00	В	l/gu	08/25/93	COMPUCHEM
PC-CG3-MW4-GW4	574062	Zinc	08.9	0.00	()B	√gn	08/25/93	COMPUCHEM
PC-CG3-MW4-GW4	574073	Zinc, Dissolved	23.80	0.00	В	l/gn	08/25/93	COMPUCHEM
PC-CG3-MW4-GW4	574057	Phenol	0.50	0.00	В	l/gu	08/25/93	COMPUCHEM
PC-CG3-MW4-GW4	574057	bis(2-Ethylhexyl)phthalate	2.00	0.00	В	ng/l	08/25/93	COMPUCHEM
PC-CG3-MW5-GW4	574362	1,1,1-Trichloroethane	80.0	00.0	B	/gn	08/26/93	COMPUCHEM
PC-CG3-MW5-GW4	574362	Methylene chloride	0.31	0.00	В	ng/l	08/26/93	COMPUCHEM
PC-CG3-MW5-GW4	574380	Antimony	43.10	0.00	OB)	/gn	08/26/93	COMPUCHEM
PC-CG3-MW5-GW4	574380	Zinc	8.80	0.00	()B	/gn	08/26/93	COMPUCHEM
PC-CG3-MW5-GW4	574397	Zinc, Dissolved	20.90	0.00	В	l/gn	08/26/93	COMPUCHEM
PC-CG3-MW5-GW4	574415	bis(2-Ethylhexyl)phthalate	2.00	0.00	В	l/gu	08/26/93	СОМРИСНЕМ

		Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan	ata Points ( CRTC, Alp	lualified "B" ena, Michigan				
ampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PO CG2 MWK.GW4	\$74417	Total Petroleum Hydrocarbons 1.00	1.00	0.25	В	mg/l	08/26/93	COMPUCHEM
PC-CO3-IM W3-CW4	\$7,476	٠.	0.41	0.00	В	l/gn	09/10/93	COMPUCHEM
FC-CG3-MW6-GW4	576676	1 3-Dichlorobenzene	0.29	0.00	В	/gn	09/10/93	COMPUCHEM
FC-CG3-IM WG-GW4	576672	Inv	42.50	0.00	()B	/Jan	09/10/93	COMPUCHEM
	576672	. E	17.20	0.00	<b>.</b> മ	/gn	09/10/93	COMPUCHEM
PC-CG3-MW6-GW4	576677	Sthvlhexvl)phthalate	7.00	0.00	В	l/gu	09/10/93	COMPUCHEM
PC-CG3-MW6-GW4	\$76678	Total Petroleum Hydrocarbons 0.80	180.80	0.25	8	mg/l	09/10/93	COMPUCHEM
DC CG3-MW7-GW4	196925	Methylene chloride	0.31	0.00	В	Vgn	09/13/93	COMPUCHEM
PC CG3-MW7-GW4	\$76961	1.2-Dichlorobenzene	0.67	0.00	æ	/gn	09/13/93	COMPUCHEM
PC CG3-IM W - C W4	196975	Toluene	0.10	0.00	B	ng/l	09/13/93	COMPUCHEM
PC CG3-IM W - CW4	\$77019	Selenium	5.30	0.00	В	ng/l	09/13/93	COMPUCHEM
PC CG3 MW7-GW4	676978	his(2-Ethylhexyl)phthalate	4.00	0.00	В	l/gn	09/13/93	COMPUCHEM
PC CG3 MW9-GW4	274367	1 1 1-Trichloroethane	0.11	0.00	В	l/gn	08/26/93	COMPUCHEM
PC-CG3-MW9-GW4	574367	Methylene chloride	0.35	0.00	В	l/gn	08/26/93	COMPUCHEM
PC-CG3-MW9-GW4	574390	Zinc	73.20	0.00	മ	/gn	08/26/93	COMPUCHEM
PC-CG3-MW9-GW4	574400	Zinc, Dissolved	21.80	0.00	B	√gn	08/26/93	COMPUCHEM
PC-CG3-MW9-GW4	574431	Phenol	0.80	0.00	В	l∕gu	08/26/93	COMPUCHEM
PC-CG3-MW9-GW4	574431	bis(2-Ethylhexyl)phthalate	2.00	0.00	B	l/gn	08/26/93	COMPUCHEM
PC-CG3-MW9-GW4	574432	Total Petroleum Hydrocarbons 0.40	ns0.40	0.25	B	mg/l	08/26/93	COMPUCHEM
PC-CG3-MM - S	574436	Chloroform	0.55	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB11-SS00-02	574436	Toluene	0.12	00.0	8	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB11-SS00-02	574446	Zinc	9.00	0.00	æ	mg/kg	_	COMPUCHEM
PC-CG3-SB11-SS04-06	574592	1.1.1-Trichloroethane	0.11	00'0	Ф	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB11-SS04-06	574592	Chloroform	0.59	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB11-SS04-06	574592	Methylene chloride	2.70	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB11-SS04-06	574592	1.2-Dichlorobenzene	0.12	0.00	В	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB11-SS04-06	574592	1.2-Dimethylbenzene	0.12	0.00	В	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB11-SS04-06	574592	Toluene	0.16	0.00	8	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB11-SS04-06	574605	Zinc	14.80	00.00	B	mg/kg	_	COMPUCHEM
PC-CG3-SB11-SS10-12	574454	Chloroform	0.42	0.00	В	ug/kg	08/26/93	сомРиснем

		Table J - 12 MIANG, Alpe	Table J - 12 Data Points Qualified "B" IIANG, Alpena CRTC, Alpena, Michiga	Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan	c			
Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-CG3-SB11-SS10-12	574454	Methylene chloride	2.40	0.00	В	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB11-SS10-12	574462	Zinc	5.40	0.00	B	mg/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS00-02	574464	Chloroform	0.50	0.00	В	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS00-02	574464	Methylene chloride	4.50	00.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS00-02	574467	Zinc	9.90	00.0	æ	mg/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS04-06	574596	1,1,1-Trichloroethane	0.00	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS04-06	574596		09.0	00.0	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS04-06	574596	Methylene chloride	2.90	00.0	æ	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS04-06	574596	1,2-Dimethylbenzene	0.14	00.0	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS04-06	574596	Toluene	0.13	0.00	æ	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS04-06	574608	Zinc	19.00	0.00	В	mg/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS10-12	574469	1,1,1-Trichloroethane	0.19	0.00	В	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS10-12	574469	Chloroform	0.53	00.0	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS10-12	574469	Methylene chloride	3.10	0.00	æ	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS10-12	574472	Zinc	4.70	0.00	æ	mg/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS00-02	574474	1,1,1-Trichloroethane	0.18	0.00	Ø	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS00-02	574474	Chloroform	09'0	0.00	В	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS00-02	574474	Methylene chloride	3.10	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS00-02	574474	1,4-Dichlorobenzene	0.25	0.00	m	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS00-02	574474	Benzene	0.02	0.00	В	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS00-02	574474	Styrene	80.0	0.00	<b>B</b>	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS00-02	574480	Zinc	7.10	0.00	B	mg/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS02-04	574487	Chloroform	0.40	0.00	8	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS02-04	574487	Methylene chloride	3.10	0.00	æ	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS02-04	574490	Zinc	10.70	0.00	В	mg/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS04-06	574597	1,1,1-Trichloroethane	0.14	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS04-06	574597	Chloroform	0.54	0.00	В	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS04-06	574597	Methylene chloride	2.80	0.00	В	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS04-06	574597	1,2-Dimethylbenzene	60.0	0.00	В	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS04-06	574597	1,4-Dichlorobenzene	0.10	0.00	В	ug/kg	08/26/93	COMPUCHEM

		Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan	Data Points ( a CRTC, Alj	Qualified "B" pena, Michigan				
Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-CG3-CB13-CS04-06	574597	Toluene	0.12	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS04-06	574613	Zinc	65.30	0.00	В	mg/kg	08/26/93	COMPUCHEM
PC-CG3-CB13-SS08-10	575034	1.1.1-Trichloroethane	0.18	0.00	В	ug/kg	08/26/93	COMPUCHEM
PC-CG3-CB13-CS08-10	575034	Chloroform	0.67	0.00	В	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS08-10	575034	Methylene chloride	10.00	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS08-10	575034	1,2-Dichlorobenzene	80.0	0.00	Ω	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS08-10	575034	1,2-Dimethylbenzene	0.35	0.00	В	ug/kg	08/26/93	COMPUCHEM
PC-CG3-8B13-8S08-10	575034	1.4-Dichlorobenzene	0.03	00'0	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS08-10	575034	Toluene	0.24	00.0	В	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS08-10	575037	Zinc	11.60	0.00	B	mg/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS10-12	574482	1.1.1-Trichloroethane	0.10	0.00	മ	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS10-12	574482	1,3-Dichlorobenzene	0.05	0.00	В	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS10-12	574482	1.4-Dichlorobenzene	0.07	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS10-12	574482	4-Chlorotoluene	90.0	0.00	В	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS10-12	574482	Chloroform	0.39	0.00	æ	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS10-12	574482	Methylene chloride	2.60	0.00	8	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS10-12	574482	Tetrachloroethylene	90.0	0.00	В	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS10-12	574482	Trichloroethylene	0.03	0.00	В	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS10-12	574485	Zinc	4.90	0.00	В	mg/kg	_	COMPUCHEM
PC-CG3-SB20-SS00-02	574492	Chloroform	0.44	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB20-SS00-02	574492	Methylene chloride	9.30	0.00	В	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB20-SS00-02	574495	Zinc	33.10	0.00	B	mg/kg	_	COMPUCHEM
PC-TF4-MW1-GW4	571677	Antimony, Dissolved	53.80	0.00	() ()	/gn	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571671	Total Petroleum Hydrocarbons 1.50	ons 1.50	0.25	В	mg/l	08/11/93	COMPUCHEM
PC-TF4-MW2-GW4	570190	1,2-Dichlorobenzene	1.00	0.00	В	√gn	08/11/93	COMPUCHEM
PC-TF4-MW2-GW4	570190	Toluene	0.21	0.00	Ф	/gn	08/11/93	COMPUCHEM
PC-TF4-MW2-GW4	570196	Copper	18.60	0.00	()B	/gn	08/11/93	COMPUCHEM
PC-TF4-MW2-GW4	570181	bis(2-Ethylhexyl)phthalate	3.00	0.00	В	ng/l	08/11/93	COMPUCHEM
PC-TF4-MW3-GW4	570205	Antimony	84.60	0.00	æ	l/gn	08/11/93	COMPUCHEM
PC-TF4-MW3-GW4	570188	bis(2-Ethylhexyl)phthalate	2.00	0.00	В	ng/l	08/11/93	COMPUCHEM

		Table J - 12 Data Points Qualified "B" MIANG, Albena CRTC, Albena, Michigan	Jata Points ( I CRTC, Alp	\ualified "B" ena, Michigan				
Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-TF4-MW3-GW4	570211	Total Petroleum Hydrocarbons 1.10	ns1.10	0.25	В	mg/l	08/11/93	COMPUCHEM
PC-TF4-MW4-GW4	570415	1,2-Dichlorobenzene	1.10	0.00	В	l/gu	08/12/93	COMPUCHEM
PC-TF4-MW4-GW4	570415	1,3-Dichlorobenzene	0.07	0.00	В	l/gu	08/12/93	COMPUCHEM
PC-TF4-MW4-GW4	570415	1,4-Dichlorobenzene	0.07	0.00	B	l/gn	08/12/93	COMPUCHEM
PC-TF4-MW4-GW4	570415	Toluene	0.11	0.00	B	l/gn	08/12/93	COMPUCHEM
PC-TF4-MW4-GW4	570462	Antimony, Dissolved	36.20	0.00	()B	/gn	08/12/93	COMPUCHEM
PC-TF4-MW4-GW4	570467	Copper	22.50	0.00	()B	ng/l	08/12/93	COMPUCHEM
PC-TF4-MW4-GW4	570425	bis(2-Ethylhexyl)phthalate	06.0	0.00	B	l/gn	08/12/93	COMPUCHEM
PC-TF4-MW4-GW4	572090	Total Petroleum Hydrocarbons 2.10	ns2.10	0.25	B	mg/l	08/12/93	COMPUCHEM
PC-TF4-MW8-GW4	571676	Antimony, Dissolved	69.20	0.00	æ	l∕gn	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571676	Lead, Dissolved	9.40	0.00	Ø	l/gn	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571676	Zinc, Dissolved	7.10	0.00	()B	/gn	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571666	Total Petroleum Hydrocarbons 0.80	ns0.80	0.25	B	mg/l	08/17/93	COMPUCHEM
PC-TF4-SD001	566948	Chloroform	1.10	0.00	B	ug/kg	07/29/93	COMPUCHEM
PC-TF4-SD001	566948	Methylene chloride	1.90	0.00	B	ug/kg	07/29/93	COMPUCHEM
PC-TF4-SD001	566948	1,2-Dichlorobenzene	3.30	0.00	В	ug/kg	07/29/93	COMPUCHEM
PC-TF4-SD001	566964	Copper	4.80	0.00	()B	mg/kg	07/29/93	COMPUCHEM
PC-TF4-SD001	566964	Lead	4.50	0.00	В	mg/kg	07/29/93	COMPUCHEM
PC-TF4-SD001	566964	Zinc	13.80	0.00	8	mg/kg	07/29/93	COMPUCHEM
PC-TF4-SD001	266956	bis(2-Ethylhexyl)phthalate	90.00	0.00	В	ug/kg	07/29/93	COMPUCHEM
PC-TF4-SD001A	266952	Chloroform	0.95	00'0	æ	ug/kg	07/29/93	COMPUCHEM
PC-TF4-SD001A	896995	Copper	7.60	0.00	()B	mg/kg	07/29/93	COMPUCHEM
PC-TF4-SD001A	896995	Lead	0.93	0.00	8	mg/kg	07/29/93	COMPUCHEM
PC-TF4-SD001A	896995	Zinc	4.80	0.00	മ	mg/kg	07/29/93	COMPUCHEM
PC-TF4-SD001A	266957	bis(2-Ethylhexyl)phthalate	50.00	0.00	В	ug/kg	07/29/93	COMPUCHEM
PC-TF4-SD002A	566954	1,1,1-Trichloroethane	0.36	0.00	B	ug/kg	07/29/93	COMPUCHEM
PC-TF4-SD002A	566954	Chloroform	1.50	00.0	æ	ug/kg	07/29/93	COMPUCHEM
PC-TF4-SD002A	266970	Copper	1.40	00.0	()B	mg/kg	07/29/93	COMPUCHEM
PC-TF4-SD002A	026995	Lead	1.30	00'0	Ω	mg/kg	07/29/93	COMPUCHEM
PC-TF4-SD002A	966970	Zinc	5.60	0.00	В	mg/kg	07/29/93	COMPUCHEM

Sampleid	Lab No	Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan Analyte Result RDL	Data Points ( CRTC, Alp Result	lualified "B" ena, Michigan RDL	Qual	Units	Date	Laboratory
PC-TF4-SD002A	566962	bis(2-Ethylhexyl)phthalate	110.00	0.00	<b>E</b>	ug/kg	07/29/93	COMPUCHEM
PC-TF4-SD002B	566953	Chloroform	86.0	0.00	<b>n</b> (	ug/kg	07/20/03	COMICCIEM
PC-TF4-SD002B	69699\$	Copper	1.80	0.00	9) (B	mg/kg	56/67//0	COMPOSITEM
PC-TF4-SD002B	696995	Lead	0.90	0.00	<b>m</b> 1	mg/kg	07/29/93	COMPOCHEM
PC-TF4-SD002B	696995	Zinc	5.90	0.00	<b>x</b> 1	mg/kg	07/29/93	COMPLICIEM
PC-TF4-SD003	566955	Chloroform	00.1	0.00	<b>x</b> t	ug/kg	07/29/93	COMPLICHEM
PC-TF4-SD003	566955	1,2-Dichlorobenzene	1.20	0.00	<b>n</b> (	ug/kg		COMPLICHEM
PC-TF4-SD003	566971	Copper	1.50	0.00	2 2 2	mg/kg		COMPLICHEM
PC-TF4-SD003	566971	Lead	3.00	0.00	ם ם	mg/kg	_	COMPLICHEM
PC-TF4-SD003	566971	Zinc	7.30	0.00	ם ם	ung/ng ung/ng	_	COMPLICHEM
PC-TF4-SD003	266963	bis(2-Ethylhexyl)phthalate	110.00	0.00	ם ב	94/9n	07/20/03	COMPLICHEM
PC-TF4-SD004A	<b>267306</b>	Chloroform	0.95	0.00	۵ ۵	ug/kg mo/l/o		COMPLICHEM
PC-TF4-SD904A	567323	Copper	07.1	0.00	<u>a</u>	mg/ng mg/hg	_	COMPLICHEM
PC-TF4-SD004A	567323	Lead	1.90	0.00	Δ Ω	mg/ng mg/ng		COMPLICHEM
PC-TF4-SD004A	567323	Zinc	12.70	0.00	a C	me/ke		COMPUCHEM
PC-TF4-SD004B	567307	Chloroform	1.10	0.00	J C	mo/ko		COMPUCHEM
PC-TF4-SD004B	567330	Copper	2.10	0.00	۵ ک	mo/ko		COMPUCHEM
PC-TF4-SD004B	567330	Zinc	9.10	80.0	Ω ¢	no/ke		COMPUCHEM
PC-TF4-SD005A	567308	Chlorotorm	18.00	00.0	<u> </u>	ue/ke	_	COMPUCHEM
PC-TF4-SD005A	567308	Metnylene chioride	6.20	000	m	me/kg	07/30/93	COMPUCHEM
PC-TF4-SD005A	567333	Copper	8 10	00.0	æ	me/kg		COMPUCHEM
PC-TF4-SD005A	56/333	Lead	01.0	000	m	mg/kg		COMPUCHEM
PC-TF4-SD005A	56/333	Zinc	100.00	00.0	<u> </u>	ue/ke	07/30/93	COMPUCHEM
PC-TF4-SD005A	567316	bis(2-Ethylnexy1)pninalate	00.00	00.0	<u> </u>	no/ke		COMPUCHEM
PC-TF4-SD005B	567310	Chlorotorm	1.40	00.0	2 5	molke	_	COMPUCHEM
PC-TF4-SD005B	567338	Copper	1.40	0.00	, a	mo/ko	_	COMPUCHEM
PC-TF4-SD005B	567338	Lead	09.1	0.00	ם ב	mo/ko	_	COMPUCHEM
PC-TF4-SD005B	567338	Zinc	6.90	0.00	<b>a</b> 6	M Sun		COMPLICHEM
PC-TF4-SD006A	567313	1,1,1-Trichloroethane	1.60 2.5	0.00	Δ Δ	ug/kg ng/kg		COMPUCHEM
PC-TF4-SD006A	567313	Chloroform	0.57	0.00	Ω	ug/kg		

		Table J - 12 Data Points Qualified "B"	Data Points (	Qualified "B"				
		MIANG, Alpena CRTC, Alpena, Michigan	a CRTC, Alt	cena, Michigan				
Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-TF4-SD006A	567313	Methylene chloride	2.90	0.00	Ø	ug/kg	07/30/93	СОМРИСНЕМ
PC-TF4-SD006A	567348	Copper	2.40	0.00	()B	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD006A	567348	Lead	3.80	0.00	<b>•</b>	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD006A	567348	Zinc	8.60	0.00	В	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD006A	567321	-Ethylhexyl)phthalate	280.00	0.00	В	ug/kg	07/30/93	COMPUCHEM
PC-TF4-SD006B	567312	Chloroform	0.74	0.00	В	ug/kg	07/30/93	COMPUCHEM
PC-TF4-SD006B	567312	Methylene chloride	2.70	0.00	В	ug/kg	07/30/93	COMPUCHEM
PC-TF4-SD006B	567346	Copper	1.90	0.00	()B	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD006B	567346	Lead	1.20	00.0	ď	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD006B	567346	Zinc	10.50	0.00	В	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD007	567551	Chloroform	0.82	00.0	В	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD007	567551	Methylene chloride	4.70	00'0	В	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD007	567551	1.2-Dichlorobenzene	3.00	00'0	В	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD007	567557	Copper	0.78	00'0	()B	mg/kg	07/31/93	COMPUCHEM
PC-TF4-SD007	567557	Lead	0.93	0.00	В	mg/kg	07/31/93	COMPUCHEM
PC-TF4-SD007	567557	Zinc	6.30	0.00	В	mg/kg	07/31/93	COMPUCHEM
PC-TF4-SD008	567552	Chloroform	0.72	0.00	В	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD008	567552	1,2-Dichlorobenzene	2.80	0.00	В	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD008	567561	Copper	1.60	0.00	()B	mg/kg		COMPUCHEM
PC-TF4-SD008	567561	Lead	4.60	0.00	В	mg/kg	07/31/93	COMPUCHEM
PC-TF4-SD008	567561	Zinc	10.60	0.00	Ø	mg/kg		COMPUCHEM
PC-TF4-SD009A	567553	Chloroform	89.0	0.00	B	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD009A	567564	Copper	1.70	0.00	()B	mg/kg		COMPUCHEM
PC-TF4-SD009A	567564	Lead	3.90	0.00	B	mg/kg	07/31/93	COMPUCHEM
PC-TF4-SD009A	567564	Zinc	10.20	0.00	В	mg/kg		COMPUCHEM
PC-TF4-SD009A	567563	bis(2-Ethylhexyl)phthalate	42.00	0.00	Ω	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD009B	567554	Chloroform	0.74	0.00	В	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD009B	567554	1,2-Dichlorobenzene	2.50	0.00	В	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD009B	267567	Beryllium	0.13	0.00	()B	mg/kg	_	COMPUCHEM
PC-TF4-SD009B	267567	Copper	3.20	0.00	В	mg/kg	07/31/93	COMPUCHEM

		Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan	Data Points (	lualified "B" ena, Michigan				•
Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
90000 PAT 24	195195	[ Pad	1.10	0.00	В	mg/kg	07/31/93	COMPUCHEM
re-Ir4-Speeds	100100	Zino	12.20	000	œ	me/ke	07/31/93	COMPUCHEM
PC-1 F4-SD009B	100100	Lind	46.00	000	ď	110/kg	07/31/93	COMPUCHEM
PC-TF4-SD009B	267266	bis(2-Ethylnexy1)phunalate	0.00	00.0	ם	04/95 104/95	07/31/03	COMPLICHEM
PC-TF4-SD010A	567555	Chloroform	0.82	0.00	<b>a</b> 6	ug/ng	0772103	COMPLICHEM
PC-TF4-SD010A	567570	Copper	4.50	0.00	n i	mg/kg	07/21/93	
PC-TF4-SD010A	567570	Lead	14.50	0.00	m	mg/kg	07/31/93	COMPUCHEM
PC-TF4-SD010A	567570	Zinc	79.20	0.00	മ	mg/kg	07/31/93	COMPUCHEM
DC.TE4-SD010A	867569	bis(2-Ethylhexyl)phthalate	55.00	0.00	m	ug/kg	07/31/93	COMPUCHEM
PC TEA CD010B	984788	1 1 1-Trichloroethane	0.28	0.00	В	ug/kg	07/31/93	COMPUCHEM
FC-1 F4-3D010B	955195	Chloroform	0.54	0.00	8	ug/kg	07/31/93	COMPUCHEM
FC-1F4-SD010B	955195	Mothylene chloride	2.70	00.0	B	ug/kg	07/31/93	COMPUCHEM
PC-1F4-SD010B	00000	Metalylene canonic	90 0	000	t,	no/ko	07/31/93	COMPUCHEM
PC-TF4-SD010B	267256	I,4-Dichlorobenzene	0.00	0.00	Q (	Gw/Gm		COMPLICHEM
PC-TF4-SD010B	567573	Copper	1.70	0.00	a) i	mg/kg		Managara
PC-TF4-SD010B	567573	Lead	3.40	0.00	<b>x</b>	mg/kg	_	COMPOCHEM
PC-TF4-SD010B	567573	Zinc	7.80	00'0	æ	mg/kg	_	COMPUCHEM
PC-TE4-SD010B	567572	bis(2-Ethylhexyl)phthalate	41.00	0.00	B	ug/kg	07/31/93	COMPUCHEM
DC TEA-SD011	567737	1.1.1-Trichloroethane	0.34	00.0	æ	ug/kg	08/01/93	COMPUCHEM
PC TE4 SD011	567737	Chloroform	1.20	00.00	В	ug/kg	08/01/93	COMPUCHEM
FC-1F4-5D011	757735	Methylene chloride	2.00	00.00	B	ug/kg	08/01/93	COMPUCHEM
PC-1 F4-SD011	\$67739	I ead	0.77	0.00	B	mg/kg	08/01/93	COMPUCHEM
PC-1F4-3D011	\$67739	Zinc	4.40	0.00	8	mg/kg	08/01/93	COMPUCHEM
PC-1F4-3D011	567741	Chloroform	1.00	00.00	Ω	ug/kg	08/01/93	COMPUCHEM
FC-114-3D012	567741	Methylene chloride	2.10	0.00	В	ug/kg	08/01/93	COMPUCHEM
PC-1F4-3D012	567743	I sad	1.70	00.00	В	mg/kg	08/01/93	COMPUCHEM
FC-1F4-3D012	567743	Zinc	5.80	0.00	æ	mg/kg	08/01/93	COMPUCHEM
FC-1F4-3D012	CATTA2	his(2-Fthylhexyl)nhthalate	47.00	0.00	8	ug/kg	08/01/93	COMPUCHEM
FC-1 F4-3D012	251196	Chloroform	1.10	0.00	æ	ug/kg	08/01/93	COMPUCHEM
FC-1 F4-3D013	567723	Mothylene chloride	4 90	000	æ	ug/kg	08/01/93	COMPUCHEM
PC-1F4-SD013	567735	Menigical caronics	1.30	0.00	B	mg/kg	6/01/93	COMPUCHEM
FC-1F4-SD013	201100	J.:	4.80	00 0	Œ	me/ke		COMPUCHEM
PC-TF4-SD013	567/35	7tuc	4.00	20.0	3	À		

	Analyte 1,1,1-Trichloroethane Chloroform Lead Zinc Chloroform Copper Lead Zinc Chloroform Zinc Chloroform Lead Zinc Chloroform Lead Zinc	Result 0.37 1.20 2.30 8.30 0.96 1.40 0.77 14.30 2.20 7.60	RDL 0.00 0.00	Qual	Units	Date	Laboratory
\$67753 \$67755 \$67755 \$67713 \$67715 \$67715 \$67747 \$67747 \$67747 \$67749 \$67725 \$67725 \$67725 \$67725 \$67731 \$67731 \$67731 \$67731 \$67731 \$67336	,1-Trichloroethane loroform ad loroform pper ad nc nloroform ad nc cloroform ad nc	0.37 1.20 2.30 8.30 0.96 1.40 0.77 0.92 2.20	0.00				
\$67753 \$67755 \$67755 \$67713 \$67715 \$67715 \$67747 \$67747 \$67747 \$67749 \$67725 \$67725 \$67725 \$67725 \$67739 \$67336	loroform ad nc loroform pper ad nc iloroform ad ad nc nc c(2-Ethylhexyl)phthalate	1.20 2.30 8.30 0.96 1.40 0.77 14.30 2.20 7.60	0.00	В	ug/kg	08/01/93	COMPUCHEM
\$67755 \$67713 \$67713 \$67715 \$67715 \$67747 \$67747 \$67747 \$67749 \$67725 \$67725 \$67725 \$67725 \$67739 \$67336	ad nc loroform ad nc loroform ad nc nc loroform ad nc	2.30 8.30 0.96 1.40 0.77 14.30 0.92 2.20	000	B	ug/kg	08/01/93	COMPUCHEM
\$67755 \$67713 \$67715 \$67715 \$67747 \$67747 \$67747 \$67747 \$67749 \$67725 \$67725 \$67725 \$67725 \$67739 \$67336	nc lloroform pper ad nc lloroform ad ad	8.30 0.96 1.40 0.77 14.30 0.92 2.20 7.60	20.0	B	mg/kg	08/01/93	COMPUCHEM
\$67713 \$67715 \$67715 \$67715 \$67747 \$67747 \$67746 \$67747 \$67717 \$67725 \$67725 \$67751 \$67751 \$67739 \$67336	loroform pper ad nc lloroform ad ad nc c(2-Ethylhexyl)phthalate	0.96 1.40 0.77 14.30 0.92 2.20 7.60	0.00	В	mg/kg	08/01/93	COMPUCHEM
\$67715 \$67715 \$67715 \$67745 \$67747 \$67746 \$67717 \$67725 \$67725 \$67749 \$67751 \$67751 \$67739 \$67336	ad nc iloroform ad nc nc	1.40 0.77 14.30 0.92 2.20 7.60	0.00	В	ug/kg	08/01/93	COMPUCHEM
\$67715 \$67715 \$67745 \$67747 \$67717 \$67717 \$67725 \$67725 \$67749 \$67751 \$67751 \$677309 \$67336	ad nc lloroform ad nc nc	0.77 14.30 0.92 2.20 7.60	0.00	(B)	mg/kg	08/01/93	COMPUCHEM
\$67715 \$67745 \$67747 \$67747 \$67746 \$67717 \$67725 \$67725 \$67749 \$67751 \$67751 \$67309 \$67336	nc lloroform ad nc (2-Ethylhexyl)phthalate	14.30 0.92 2.20 7.60	0.00	m	mg/kg	08/01/93	COMPUCHEM
\$67745 \$67747 \$67747 \$67746 \$67717 \$67725 \$67725 \$67749 \$67749 \$67751 \$67751 \$67309 \$67336	lloroform ad nc (2-Ethylhexyl)phthalate	0.92 2.20 7.60	0.00	B	mg/kg	08/01/93	COMPUCHEM
	ad nc :(2-Ethylhexyl)phthalate	2.20 7.60	0.00	B	ug/kg	08/01/93	COMPUCHEM
\$67747 \$67717 \$67717 \$67725 \$67725 \$67749 \$67749 \$67751 \$67751 \$67309 \$67336	nc (2-Ethylhexyl)phthalate	09.7	0.00	B	mg/kg	08/01/93	COMPUCHEM
	(2-Ethylhexyl)phthalate		0.00	8	mg/kg	08/01/93	COMPUCHEM
		85.00	0.00	B	ug/kg	08/01/93	COMPUCHEM
	Methylene chloride	0.77	0.00	В	ug/kg	08/01/93	COMPUCHEM
	Lead	7.30	0.00	8	mg/kg	08/01/93	COMPUCHEM
	nc	40.90	0.00	В	mg/kg	08/01/93	COMPUCHEM
	1,1,1-Trichloroethane	1.10	0.00	B	ug/kg	08/01/93	COMPUCHEM
	Horoform	2.10	0.00	В	ug/kg	08/01/93	COMPUCHEM
	Lead	1.60	0.00	В	mg/kg	08/01/93	COMPUCHEM
	Zinc	14.10	0.00	B	mg/kg	08/01/93	COMPUCHEM
	Chloroform	1.10	0.00	æ	ug/kg	07/30/93	COMPUCHEM
567336 567336	Methylene chloride	3.30	0.00	В	ug/kg	07/30/93	COMPUCHEM
567336	Copper	2.10	0.00	()B	mg/kg	07/30/93	COMPUCHEM
	Lead	1.40	0.00	В	mg/kg	07/30/93	COMPUCHEM
٠,	Zinc	8.50	0.00	В	mg/kg	07/30/93	COMPUCHEM
567311	1,1,1-Trichloroethane	0.43	0.00	В	ug/kg	07/30/93	COMPUCHEM
567311	Chloroform	0.99	0.00	m	ug/kg	07/30/93	COMPUCHEM
567311	Methylene chloride	3.90	0.00	മ	ug/kg	07/30/93	COMPUCHEM
567340	Copper	1.90	0.00	()B	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD106B 567340 Le	Lead	1.90	0.00	М	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD106B 567340 Zii	Zinc	8.30	0.00	8	mg/kg		COMPUCHEM

		Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan	Data Points ( a CRTC, Alg	Qualified "B" pena, Michigan				
Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-TF4-SD106B	\$67319	bis(2-Ethylhexyl)phthalate	00.09	0.00	8	ug/kg	07/30/93	COMPUCHEM
PC-TF4-SD115	567757	1.1.1-Trichloroethane	0.37	0.00	8	ug/kg	08/01/93	COMPUCHEM
PC-TF4-SD115	567757	Chloroform	1.20	0.00	В	ug/kg	08/01/93	COMPUCHEM
PC-TF4-SD115	567757	Methylene chloride	96.90	0.00	В	ug/kg	08/01/93	COMPUCHEM
PC-TF4-SD115	567759	Lead	0.80	0.00	В	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SD115	567759	Zinc	5.80	0.00	B	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SW001	266797	Methylene chloride	0.29	0.00	<b>B</b>	/gn	07/28/93	COMPUCHEM
PC-TF4-SW001	266797	1,2-Dichlorobenzene	1.00	0.00	B	√gn	07/28/93	COMPUCHEM
PC-TF4-SW001	266797	1,4-Dichlorobenzene	0.17	0.00	В	/gn	07/28/93	COMPUCHEM
PC-TF4-SW001	266797	Toluene	0.16	0.00	В	/gn	07/28/93	COMPUCHEM
PC-TF4-SW001	566803	Copper	4.60	0.00	()B	√gn	07/28/93	COMPUCHEM
PC-TF4-SW002	566819	Methylene chloride	0.32	0.00	B	ng/l	07/28/93	COMPUCHEM
	566819	Toluene	0.11	0.00	8	ng/l	07/28/93	COMPUCHEM
PC-TF4-SW002	566822	Antimony	56.60	0.00	B	l/gn	07/28/93	COMPUCHEM
	566822	Copper	5.00	0.00	()B	l/gn	07/28/93	COMPUCHEM
PC-TF4-SW003	566824	Methylene chloride	0.17	0.00	8	ng/l	07/28/93	COMPUCHEM
PC-TF4-SW003	566824	Toluene	0.33	0.00	B	ng∕I	07/28/93	COMPUCHEM
PC-TF4-SW004	566828	1,1,1-Trichloroethane	0.16	00.0	В	//gn	07/28/93	COMPUCHEM
PC-TF4-SW004	566828	Benzene	0.14	00'0	В	l/gn	07/28/93	COMPUCHEM
PC-TF4-SW004	566828	Toluene	0.18	0.00	В	/gn	07/28/93	COMPUCHEM
PC-TF4-SW005	567254	Methylene chloride	0.18	0.00	В	l/gn	07/30/93	COMPUCHEM
PC-TF4-SW005	567260	bis(2-Ethylhexyl)phthalate	06.0	0.00	B	l/gu	07/30/93	COMPUCHEM
PC-TF4-SW006	567252	Methylene chloride	0.33	0.00	æ	/gn	07/30/93	COMPUCHEM
PC-TF4-SW006	567258	bis(2-Ethylhexyl)phthalate	1.00	0.00	B	l/gn	07/30/93	COMPUCHEM
PC-TF4-SW007	567250	Chloroform	0.29	0.00	B	/gn	07/30/93	COMPUCHEM
PC-TF4-SW007	567250	Methylene chloride	0.15	0.00	Ω	ng/l	07/30/93	COMPUCHEM
PC-TF4-SW007	567283	Antimony	56.50	0.00	മ	/gn	07/30/93	COMPUCHEM
PC-TF4-SW007	567257	bis(2-Ethylhexyl)phthalate	2.00	0.00	В	l/gn	07/30/93	COMPUCHEM
PC-TF4-SW008	567256	Methylene chloride	0.34	0.00	B	l/gn	07/30/93	COMPUCHEM
PC-TF4-SW008	567303	Copper	5.40	0.00	() <b>B</b>	l/gu	07/30/93	COMPUCHEM

wp/tj-12.540-October 12, 1994

COMPUCHEM Laboratory 8/24/93 38/24/93 8/24/93 38/24/93 8/24/93 08/24/93 08/24/93 08/24/93 08/24/93 08/24/93 08/24/93 08/24/93 08/24/93 38/24/93 08/24/93 38/24/93 08/24/93 18/24/93 08/15/93 08/24/93 08/24/93 08/24/93 08/15/93 08/12/93 08/15/93 08/15/93 08/15/93 07/30/93 08/15/93 08/15/93 √gш Vgn mg/l √gn l/gn /gn l/gn l/gn Vgn l/gn l/gn √gn Mg∕l l/gn ng/l l/gn Ng∕l l/gn Vgn l/gn l/gn l/gn Vgn Qual MIANG, Alpena CRTC, Alpena, Michigan Table J - 12 Data Points Qualified "B" 0.00 0.00 0.00 0.00 0.00 0.00 0.25 0.00 0.25 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.25 0.00 0.00 0.00 Result 6.80 74.50 1.00 0.28 0.10 0.09 1.00 11.00 2.20 0.14 5.90 33.60 27.90 Total Petroleum Hydrocarbons 3.80 14.80 4.20 3.00 Fotal Petroleum Hydrocarbons 1.70 19.90 22.10 Total Petroleum Hydrocarbons 5.80 bis(2-Ethylhexyl)phthalate bis(2-Ethylhexyl)phthalate bis(2-Ethylhexyl)phthalate ,2-Dichlorobenzene Antimony, Dissolved 1,2-Dichlorobenzene Di-n-butyl phthalate Methylene chloride Methylene chloride Methylene chloride Arsenic, Dissolved Zinc, Dissolved Zinc, Dissolved Ethylbenzene Ethylbenzene Cadmium Toluene Copper **Foluene** Toluene Copper Analyte Phenol Zinc Zinc Zinc 574080 574059 573656 574052 574059 574076 573653 573656 573654 573654 573655 574052 574052 Lab No 574053 574053 574053 574053 574064 574064 571313 571276 571298 571313 571313 571297 571297 PC-SF5-MW4-GW4 PC-SF5-MW3-GW4 PC-SF5-MW3-GW4 PC-SF5-MW3-GW4 PC-SF5-MW3-GW4 PC-SF5-MW4-GW4 PC-SF5-MW4-GW4 PC-SF5-MW4-GW4 PC-SF5-MW4-GW4 PC-SF5-MW2-GW4 PC-SF5-MW2-GW4 PC-SF5-MW2-GW4 PC-SF5-MW2-GW4 PC-SF5-MW2-GW4 PC-SF5-MW2-GW4 PC-SF5-MW2-GW4 PC-SF5-MW3-GW4 PC-SF5-MW1-GW4 PC-SF5-MW2-GW4 PC-SF5-MW2-GW4 PC-SF5-MW2-GW4 PC-SF5-MW3-GW4 PC-SF5-MW1-GW4 PC-SF5-MW1-GW4 PC-SF5-MW1-GW4 PC-SF5-MW1-GW4 PC-SF5-MW1-GW4 PC-SF5-MW1-GW4 PC-SF5-MW1-GW4 PC-TF4-SW106

Laboratory	COMPUCHEM COMPUCHEM	
Date	08/24/93 08/24/93 08/29/93 08/29/93 08/29/93 08/29/93 08/29/93 08/29/93 08/29/93 08/29/93 08/29/93 08/29/93 08/29/93 08/29/93 08/29/93 08/29/93 08/29/93 08/29/93 09/13/93 09/13/93 09/13/93	
Units	Van	
Qual	0)B 0)B 0)B 0)B 0)B 0)B 0)B 0)B 0)B 0)B	
Qualified "B" pena, Michigan RDL	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	
Data Points ( CRTC, Aly Result	65.30 2.00 0.08 0.17 0.74 38.50 4.40 9.50 7.10 4.00 33.60 9.40 5.00 9.40 5.00 10.10 0.39 7.50 14.70 18.20 3.00 0.28 0.43 0.15 0.39 0.43 0.15 0.39	i i
Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan Result RDL	Zinc, Dissolved bis(2-Ethylhexyl)phthalate 1,1,1-Trichloroethane Chloroform Methylene chloride 6.74 Antimony Copper Selenium Zinc Dis(2-Ethylhexyl)phthalate Dis(2-Ethylhexyl)	Memyione enterior
Lab No	574075 574058 575028 575028 575030 575030 575030 575031 574969 574972 574972 576977 576959 576959 576959 576959 576959 576959 576959	9/09/9
Sampleid	PC-SF5-MW4-GW4 PC-SF5-MW4-GW4 PC-SF5-MW5-GW4 PC-SF5-MW5-GW4 PC-SF5-MW5-GW4 PC-SF5-MW5-GW4 PC-SF5-MW5-GW4 PC-SF5-MW5-GW4 PC-SF5-MW6-GW4 PC-SF5-MW6-GW4 PC-SF5-MW6-GW4 PC-SF5-MW6-GW4 PC-SF5-MW6-GW4 PC-SF5-MW6-GW4 PC-SF5-MW7-GW4 PC-SF5-MW7-GW4 PC-SF5-MW7-GW4 PC-SF5-MW7-GW4 PC-SF5-MW7-GW4 PC-SF5-MW7-GW4 PC-SF5-MW8-GW4	PC-SF5-MW9-GW4

	Laboratory	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	СОМРИСНЕМ
	Date	09/13/93	09/13/93	09/13/93	09/13/93	09/13/93	09/12/93	09/12/93	09/12/93	09/12/93	08/12/93	08/12/93	09/16/93	09/16/93	09/16/93	09/16/93	08/11/93	08/11/93	08/11/93	08/11/93	08/11/93	08/11/93	08/26/93	08/26/93	08/26/93	08/26/93	08/26/93	08/26/93	08/26/93	08/30/93	08/30/93
	Units	/gn	l/gn	l/gu	ng/l	l/gu	l∕gu	l/gn	/gn	l/gn	√gn	mg/l	l/gn	ng/l	l/gn	mg/l	/gn	/gn	//gn	√gn	//gn	Wg∕l	√gn	√gn	/gn	/gn	l/gn	/gn	mg/l	ng/l	ng/l
	Qual	В	B	()B	В	В	В	В	B	B	B	B	В	()B	B	B	B	B	()B	()B	B	В	()B	()B	В	മ	B	В	В	В	()B
Qualified "B" pena, Michigan	RDL	0.00	0.00	0.00	00'0	0.00	00.0	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00
Data Points	Result	0.11	0.18	4.50	0.50	3.00	98.0	0.20	0.19	0.16	2.00	ns1.60	0.10	4.60	2.00	ns0.90	0.58	0.15	48.40	06.9	2.00	ns0.50	4.20	4.30	0.80	0.70	3.00	5.00	ons 0.50	0.34	8.20
Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan	Analyte	1,2-Dichlorobenzene	Toluene	Arsenic, Dissolved	Phenol	bis(2-Ethylhexyl)phthalate	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Toluene	bis(2-Ethylhexyl)phthalate	Total Petroleum Hydrocarbons 1.60	Methylene chloride	Arsenic, Dissolved	bis(2-Ethylhexyl)phthalate	Total Petroleum Hydrocarbons 0.90	1,2-Dichlorobenzene	Toluene	Antimony	Zinc	bis(2-Ethylhexyl)phthalate	Total Petroleum Hydrocarbons 0.50	Copper	Zinc	Di-n-butyl phthalate	Diethyl phthalate	Phenol	bis(2-Ethylhexyl)phthalate	Total Petroleum Hydrocarbons 0.50	Methylene chloride	Copper
	Lab No	576954	576954	577013	99692	576966	570412	570412	570412	570412	570419	570449	578083	578095	578083	578092	570193	570193	570203	570203	570187	570210	574377	574377	574408	574408	574408	574408	574411	574951	574955
	Sampleid	PC-SF5-MW9-GW4	PC-SF5-MW9-GW4	PC-SF5-MW9-GW4	PC-SF5-MW9-GW4	PC-SF5-MW9-GW4	PC-LF6-MW1-GW4	PC-LF6-MW1-GW4	PC-LF6-MW1-GW4	PC-LF6-MW1-GW4	PC-LF6-MW1-GW4	PC-LF6-MW1-GW4	PC-LF6-MW10-GW4	PC-LF6-MW10-GW4	G PC-LF6-MW10-GW4	PC-LF6-MW10-GW4	PC-LF6-MW2-GW4	PC-LF6-MW2-GW4	PC-LF6-MW2-GW4	PC-LF6-MW2-GW4	PC-LF6-MW2-GW4	PC-LF6-MW2-GW4	PC-LF6-MW3-GW4	PC-LF6-MW3-GW4	PC-LF6-MW3-GW4	PC-LF6-MW3-GW4	PC-LF6-MW3-GW4	PC-LF6-MW3-GW4	PC-LF6-MW3-GW4	PC-LF6-MW4-GW4	PC-LF6-MW4-GW4

Sampleid	Lab No	Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan Analyte RDL	Data Points ( a CRTC, Alp Result	Yualified "B" pena, Michigan RDL	Qual	Units	Date	Laboratory
MAD MAN OUT OR	\$74055	Zinc	20.40	0.00	B	l/gn	08/30/93	COMPUCHEM
PC-LF6-MW4-GW4	0.447.0	Time Discoluted	8 80	000	OB	ng/l	08/30/93	COMPUCHEM
PC-LF6-MW4-GW4	574939	Zinc, Dissolved	00.0	000	, ec	/an	09/12/93	COMPUCHEM
PC-LF6-MW4-GW4	\$76976	bis(2-Ethylhexyl)phinalate	00.4	90.0	a a	, eu	08/30/93	COMPUCHEM
PC-LF6-MW4-GW4	574957	Total Petroleum Hydrocarbons0.50	00.0suc	C7.0	ء ۵	1/S/11	08/30/03	COMPLICHEM
PC-LF6-MW5-GW4	574933	Methylene chloride	0.35	0.00	<b>a</b> 6	l/Sin	60/06/90	COMPLICHEM
PC-LF6-MW5-GW4	574933	1,2-Dichlorobenzene	0.15	0.00	מ ל	ug/1	08/30/93	COMPLICHEM
PC-LF6-MW5-GW4	574936	Copper	4.90	0.00	<u>.</u>	ug/1	06/30/33	COMPLICHEM
PC-LF6-MW5-GW4	574936	Zinc	11.60	0.00	9 5	ng/l	06/30/33	COMPLICHEM
PC-LF6-MW5-GW4	574938	Zinc, Dissolved	10.00	0.00	<u>n</u>	ng/1	06/30/33	COMPLICHEM
PC-LF6-MW5-GW4	576975	bis(2-Ethylhexyl)phthalate	00.6	0.00	2 c	ng/l	09/12/93	COMPLICHEM
PC-LF6-MW6-GW4	575017	Antimony	35.20	0.00	a 6	ng/1	00/20/22	COMPLICHEM
PC-LF6-MW6-GW4	575017	Copper	5.20	0.00	<u>n</u>	ng/I	08/20/93	COMPLICHEM
PC-LF6-MW6-GW4	575017	Zinc	67.70	0.00	<b>2</b> 2 £	ng/l	08/30/93	COMPLICHEM
	575019	Zinc, Dissolved	38.20	0.00	<b>2</b> 0 6	ug/l	08/30/93	COMPLICHEM
PC-LF6-MW6-GW4	576986	bis(2-Ethylhexyl)phthalate	4.00	0.00	<b>2</b> 0 (	ng/i	09/17/93	COMPLICHEM
	575018	Total Petroleum Hydrocarbons 2.30	ons2.30	0.25	Σ¢	mg/l	08/30/93	COMPLICHEM
PC-LF6-MW8-GW4	576281	Methylene chloride	0.42	0.00	ם ב	ng/I	09/08/93	COMPLICHEM
PC-LF6-MW8-GW4	576281	1,2-Dichlorobenzene	1.00	0.00	מנ	ng/1	09/08/93	COMPLICHEM
PC-LF6-MW8-GW4	576281	1,3-Dichlorobenzene	0.27	0.00	מנ	ng/1	09/00/93	COMPLICHEM
PC-LF6-MW8-GW4	576281	1,4-Dichlorobenzene	0.27	0.00	ם נ	ng/l	09/00/23	COMPLICHEM
PC-LF6-MW8-GW4	576279	bis(2-Ethylhexyl)phthalate	8.00 6.00	0.00	ם ם	ug/1	09/08/22	COMPLICHEM
PC-LF6-MW8-GW4	576283	Total Petroleum Hydrocarbons 0.60	ons0.60	0.25	ם ב	IIIg/I	20/00/00	COMPLICHEM
PC-LF6-MW9-GW4	576285	Methylene chloride	89.0	0.00	za t	ng/l	09/08/93	COMPLICHEM
PC-LF6-MW9-GW4	576285	1,2-Dichlorobenzene	2.40	0.00	za t	ng/1	09/08/93	COMPLICHEM
pC_1 F6_MW9_GW4	576285	1,3-Dichlorobenzene	0.19	0.00	<b>x</b> a :	ng/l	09/08/93	COMPOCHEM
PC-1 F6-MW9-GW4	576285	1,4-Dichlorobenzene	0.21	0.00	<b>m</b> :	l/gu	69/08/93	COMPOCHEM
PC-1.F6-MW9-GW4	576286	Antimony	42.40	0.00	9 ()	ng/l	09/08/93	COMPOCHEM
PC-1 F6-MW9-GW4	576286	Selenium	24.50	0.00	m i	ng/l	09/08/93	COMPLICHEM
PC-LF6-MW9-GW4	576284	bis(2-Ethylhexyl)phthalate		0.00	m i	l/gn		COMPUCHEM
PC-LF6-SD1	571972	1,1,1-Trichloroethane	3.30	0.00	n	ug/kg	08/1/1/90	

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	Laboratory	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	СОМРИСНЕМ
	Date	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	09/09/93	09/09/93	09/09/93	09/09/93	09/09/93	09/09/93	09/09/93	09/14/93	09/14/93	09/14/93	09/14/93
	Units	ug/kg	ug/kg	mg/kg	mg/kg	ug/kg	ug/kg	ug/kg	mg/kg	mg/kg	ug/kg	ug/kg	mg/kg	mg/kg	ug/kg	ug/kg	ug/kg	mg/kg	mg/kg	mg/kg	l/gn	ng/l	l/gn	/gn	/gn	l/gn	Vgn	l∕gu	l/gn	ng/l	Vgn
	Qual	æ	æ	()B	B	В	В	В	В	B	æ	В	В	В	В	æ	В	B	В	B	B	В	В	()B	()B	B	m	B	B	В	()B
Qualified "B" Jena, Michigan	RDL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	00.0	00.0	0.00	00.0	0.00	0.00
ata Points ( CRTC, Alp	Result	1.20	1.90	2.50	20.70	0.38	4.80	0.23	11.90	199.00	0.23	1.70	2.80	80.70	0.72	0.61	1.50	2.00	0.97	67.40	80.0	0.32	4.60	42.50	3.30	1.00	4.00	0.16	0.14	0.36	3.00
Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan	Analyte	Chloroform	Methylene chloride	Arsenic	Zinc	Chloroform	Methylene chloride	1,2-Dichlorobenzene	Arsenic	Zinc	Chloroform	Methylene chloride	Arsenic	Zinc	1,1,1-Trichloroethane	Chloroform	Methylene chloride	Arsenic	Selenium	Zinc	1,1,1-Trichloroethane	Methylene chloride	1,3-Dichlorobenzene	Antimony, Dissolved	Selenium	Di-n-butyl phthalate	bis(2-Ethylhexyl)phthalate	Methylene chloride	1,3-Dichlorobenzene	Toluene	Selenium
	Lab No	571972	571972	572014	572014	571967	271967	271967	572000	572000	571968	571968	572005	572005	571973	571973	571973	572019	572019	572019	576484	576484	576484	576494	576488	576486	576486	577486	577486	577486	577507
	Sampleid	PC-LF6-SD1	PC-LF6-SD1	PC-LF6-SD1	PC-LF6-SD1	PC-LF6-SD2	PC-LF6-SD2	PC-LF6-SD2	PC-LF6-SD2	PC-LF6-SD2	PC-LF6-SD3	PC-LF6-SD3	PC-LF6-SD3	PC-LF6-SD3	PC-LF6-SD4	PC-LF6-SD4	PC-LF6-SD4	PC-LF6-SD4	PC-LF6-SD4	PC-LF6-SD4	PC-FF7-MW1-GW4	PC-FF7-MW1-GW4	PC-FF7-MW1-GW4	PC-FF7-MW1-GW4	PC-FF7-MW1-GW4	PC-FF7-MW1-GW4	PC-FF7-MW1-GW4	PC-FF7-MW2-GW4	PC-FF7-MW2-GW4	PC-FF7-MW2-GW4	PC-FF7-MW2-GW4

		Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan	Data Points C	Qualified "B" pena, Michigan	-	2	9	Lahoratory
Sampleid	Lab No	Analyte	Result	KDL	Çuai	Onits	Date	Laboratory
	10757	kis (2 - Ethylboxy)) nhthalate	2.00	0.00	В	l/gn	09/14/93	COMPUCHEM
PC-FF7-MWZ-GW4	2//48/	m in the factor of the state of	09 05.	0.05	Œ	me/l	09/14/93	COMPUCHEM
PC-FF7-MW2-GW4	\$77505	Total Petroleum Hydrocaroonsv.ov	1150.00 0.04	6.00	ğ	/ / /	09/15/93	COMPUCHEM
PC-FF7-MW3-GW4	577695	Methylene chloride	0.24	0.00	ם ל	ug/1	00/15/03	COMPLICHEM
PC-FF7-MW3-GW4	577712	Arsenic, Dissolved	4.10	0.00	<u>9</u> (	ng/I	09/13/73	COMPLICIEM
PC-FF7-MW3-GW4	577710	Selenium	3.40	0.00	90	ng/I	09/13/93	COMPOSITEM
DC FE7-MW3-GW4	\$77700	Di-n-butyl phthalate	06.0	0.00	æ	ng/l	09/15/93	COMPUCHEM
DO EEG MW2 CWA	677700	his(2-Ethylhexyl)phthalate	11.00	0.00	m	ng/l	09/15/93	COMPOCHEM
FC-FF7-IM W3-GW+	577711	Total Petroleum Hydrocarbons 0.80	980.80	0.25	Ф	mg/l	09/15/93	COMPUCHEM
PC-FF /-M WS-GW+	076123	Mothylene chloride	0.11	0.00	В	/gn	08/15/93	COMPUCHEM
PC-HN8-MWI-GW4	271200	1.2 Dishlosshengene	0.53	00.00	8	ng/l	08/15/93	COMPUCHEM
PC-HN8-MWI-GW4	0071/6	1,3-1,1-1,1-1,1-1,1-1,1-1,1-1,1-1,1-1,1-	52.30	000	OB	ng/l	08/15/93	COMPUCHEM
PC-HN8-MW1-GW4	271286	Antimony	72.30	00.0	S C	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	08/15/93	COMPUCHEM
PC-HN8-MW1-GW4	571628	Antimony, Dissolved	46.10	0.00	2 6	1/8m	08/15/03	COMPLICHEM
PC-HN8-MW1-GW4	571628	Lead, Dissolved	4.80	0.00	ום	ng/I	06/15/00	COMPLICHEM
PC-HN8-MW1-GW4	571271	bis(2-Ethylhexyl)phthalate	3.00	0.00	<b>2</b> 0 1	ng/I	08/13/93	COMPLICITEM
DC-HN8-MW1-GW4	571287	Total Petroleum Hydrocarbons 2.30	ons 2.30	0.25	m	mg/l	08/17/93	COMPOCITEN
pC-HN8-MW2-GW4	574927	Methylene chloride	0.83	0.00	m	ng/l	08/29/93	COMPOCHEM
by HN8-MW2-GW4	574927	1.4-Dichlorobenzene	0.25	0.00	m	ng/l	08/29/93	COMPUCHEM
FC-FIN8-IN WZ-CW4	574927	Toluene	0.24	0.00	В	/gn	08/29/93	COMPUCHEM
PC-HN8-MW2-GW4	574020	Zinc	9.20	0.00	()B	l/gn	08/29/93	COMPUCHEM
PC-HN8-MW2-GW4	574023	Zino Dissolved	15.90	0.00	()B	ng/l	08/29/93	COMPUCHEM
PC-HN8-MW2-GW4	3/4932	Line, Dissolved	2 00	000	m	l/gu	09/12/93	COMPUCHEM
PC-HN8-MWZ-GW4	3/0993	Test Description Undergraphen	09.5	0.25	8	mg/l	08/29/93	COMPUCHEM
PC-HN8-MW2-GW4	5/4931	10tal Fettoleum riyulocaro	0 50	00.0	œ	Van	08/29/93	COMPUCHEM
PC-HN8-MW3-GW4	574989	Methylene chioride	0.30	00.0	, C	Vo.	08/29/93	COMPUCHEM
PC-HN8-MW3-GW4	574994	Zinc	7.90	0.00	2 2	1/Sn	08/20/03	COMPLICHEM
PC-HN8-MW3-GW4	574997	Zinc, Dissolved	08.9	0.00	a a	ug/1	20/17/00	COMPLICHEM
PC-HN8-MW3-GW4	216989	bis(2-Ethylhexyl)phthalate	3.00	0.00	<b>20</b> 1	ng/1	09/17/93	COMPLICITEM
PC-HN8-MW3-GW4	574996	Total Petroleum Hydrocarbons 1.00	ons 1.00	0.25	<b>x</b>	mg/l	08/59/93	COMPOSITEM
PC-HN8-MW4-GW4	575003	Chloroform	0.33	0.00	<b>m</b>	√gn	08/29/93	COMPOCHEM
PC-HN8-MW4-GW4	575003	Methylene chloride	0.83	0.00	e i	∏gn	08/53/93	COMPUCHEM
PC-HN8-MW4-GW4	575006	Zinc	15.30	0.00	()B	ng/I	08/53/93	COMPOCEEM

	Laboratory	9/93 СОМРИСНЕМ	2/93 COMPUCHEM	4/93 COMPUCHEM	4/93 COMPUCHEM	4/93 COMPUCHEM	4/93 COMPUCHEM	4/93 COMPUCHEM	9/93 СОМРИСНЕМ	9/93 СОМРИСНЕМ	9/93 СОМРИСНЕМ	9/93 СОМРИСНЕМ	09/12/93 COMPUCHEM	9/93 COMPUCHEM	08/13/93 COMPUCHEM	08/13/93 COMPUCHEM	08/13/93 COMPUCHEM	08/13/93 COMPUCHEM	08/13/93 COMPUCHEM	08/13/93 COMPUCHEM	08/13/93 COMPUCHEM	08/13/93 COMPUCHEM	08/13/93 COMPUCHEM	08/13/93 COMPUCHEM	08/13/93 COMPUCHEM	08/13/93 COMPUCHEM	08/13/93 COMPUCHEM	08/13/93 COMPUCHEM	08/13/93 COMPUCHEM	08/13/93 COMPUCHEM	13/03 COMPLICHEM
	Date	08/29/93	09/12/93	09/14/93	09/14/93	09/14/93	09/14/93	09/14/93	08/29/93	08/29/93	08/29/93	08/29/93	09/1	08/29/93	_	_		_		_		_			_	_		_			
	Units	l∕gu	/gn	l/gn	l∕gu	/gn	l/gn	mg/l	√gn	l/gn	l/gu	/gn	/gn	mg/l	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	mg/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	mg/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
	Qual	()B	В	В	B	B	В	В	В	B	()B	()B	B	В	В	В	Ø	B	B	8	В	В	B	В	B	В	8	B	В	æ	B
Qualified "B" pena, Michigan	RDL	0.00	0.00	0.00	0.00	0.00	0.00	0.25	00.0	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ata Points CRTC, Al	Result	6.20	7.00	0.21	0.14	0.17	3.00	ns0.40	99.0	0.15	6.70	11.80	8.00	ns0.60	80.0	0.63	1.40	0.04	0.21	10.10	0.07	0.42	1.00	0.03	0.21	5.60	0.13	0.97	1.20	0.13	0.25
Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan	Analyte	Zinc, Dissolved	bis(2-Ethylhexyl)phthalate	Methylene chloride	1,2-Dichlorobenzene	Toluene	bis(2-Ethylhexyl)phthalate	Total Petroleum Hydrocarbons 0.40	Methylene chloride	Toluene	Zinc	Zinc, Dissolved	bis(2-Ethylhexyl)phthalate	Total Petroleum Hydrocarbons 0.60	1,1,1-Trichloroethane	Chloroform	Methylene chloride	1,2-Dimethylbenzene	Toluene	Zinc	1,1,1-Trichloroethane	Chloroform	Methylene chloride	1,2-Dimethylbenzene	Toluene	Zinc	1,1,1-Trichloroethane	Chloroform	Methylene chloride	1,4-Dichlorobenzene	Tolnene
	Lab No	575011	576974	577542	577542	577542	577546	577548	574939	574939	574944	574949	576992	574946	570778	570778	570778	570778	570778	570786	570779	570779	570779	570779	570779	570788	570780	570780	570780	570780	570780
	Sampleid	PC-HN8-MW4-GW4	PC-HN8-MW4-GW4	PC-HN8-MW5-GW4	PC-HN8-MW5-GW4	PC-HN8-MW5-GW4	PC-HN8-MW5-GW4	PC-HN8-MW5-GW4	PC-HN8-MW9-GW4	PC-HN8-MW9-GW4	PC-HN8-MW9-GW4	PC-HN8-MW9-GW4	PC-HN8-MW9-GW4	PC-HN8-MW9-GW4	PC-HN8-SB2-SS01-02	PC-HN8-SB2-SS01-02	PC-HN8-SB2-SS01-02	PC-HN8-SB2-SS01-02	PC-HN8-SB2-SS01-02	PC-HN8-SB2-SS01-02	PC-HN8-SB2-SS02-03	PC-HN8-SB2-SS02-03	PC-HN8-SB2-SS02-03	PC-HN8-SB2-SS02-03	PC-HN8-SB2-SS02-03	PC-HN8-SB2-SS02-03	PC-HN8-SB2-SS09-10	PC-HN8-SB2-SS09-10	PC-HN8-SB2-SS09-10	PC-HN8-SB2-SS09-10	PC-HN8-SB2-SS09-10

·	Laboratory	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM
	Date	08/13/93	08/13/93	08/13/93	08/13/93	08/13/93	08/13/93	08/13/93	08/13/93	08/13/93	08/13/93	08/13/93	08/13/93	08/13/93	08/13/93	08/13/93	08/13/93	08/13/93	08/13/93	08/13/93	08/13/93	08/13/93	_	_	_	08/15/93	08/15/93	_	_	08/15/93	08/15/93
	Units	mg/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	mg/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	mg/kg	ug/kg	ug/kg	ug/kg	ug/kg	mg/kg	ug/kg	ug/kg	ug/kg	ug/kg	mg/kg	mg/kg	ug/kg	ug/kg	mg/kg	mg/kg	ug/kg	ug/kg
	Qual	B	B	В	В	Ø	മ	æ	В	В	В	B	B	В	В	В	В	В	В	B	B	В	B	മ	В	B	Ф	В	В	æ	В
Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan	RDL	0.00	0.00	0.00	0.00	00.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.30	0.00	00.0	00.00	0.00	0.00	0.00
Table J - 12 Data Points Qualified "B" IIANG, Alpena CRTC, Alpena, Michiga	Result	4.70	0.55	1.60	0.12	0.04	0.13	8.50	0.07	0.24	0.48	0.30	0.15	4.20	0.22	0.31	0.21	0.12	13.30	0.20	0.43	0.13	0.19	4.60	rbons 7.30	0.26	0.61	2.50	15.00	0.51	5.70
Table J - 12 MIANG, Alpe	Analyte	Zinc	Chloroform	Methylene chloride	1.2-Dimethylbenzene	1.3-Dichlorobenzene	1,4-Dichlorobenzene	Zinc	1.1.1-Trichloroethane	Chloroform	Methylene chloride	1.2-Dimethylbenzene	Styrene	Zinc	Chloroform	Methylene chloride	1,2-Dimethylbenzene	Toluene	Zinc	Chloroform	Methylene chloride	1,2-Dimethylbenzene	Toluene	Zinc	Total Petroleum Hydrocarbons 7.30	1,1,1-Trichloroethane	Chloroform	Arsenic	Zinc	Chloroform	Methylene chloride
	Lab No	570795	570781	570781	570781	570781	570781	570798	570782	570782	570782	570782	570782	570804	570783	570783	570783	570783	570807	570784	570784	570784	570784	570810	570811	571327	571327	571364	571364	571320	571320
	Sampleid	PC-HN8-SR2-SS09-10	PC-HN8-SR3-SS01-02	PC-HN8-SR3-SS01-02	PC-HN8-CB3-CS01-02	PC-HN8-SB3-SS01-02	PC-HN8-SB3-SS01-02	PC-HN8-SB3-SS01-02	PC-HN8-SB3-SS05-11	PC-HN8-SB3-SS09-11	PC-HN8-SB3-SS09-11	PC-HN8-SB3-SS0-11	PC-HN8-SB3-SS09-11	PC-HN8-CB3-CS09-11	PC-HN8-SB4-SS00-02	PC-HN8-SB4-SS00-02	PC-HN8-SB4-SS00-02	PC-HN8-SB4-SS00-02	PC-HN8-SB4-SS00-02	PC-HN8-SB4-SS12-14	PC-HN8-SB4-SS12-14	PC-HN8-SB4-SS12-14	PC-HN8-SB4-SS12-14	PC-HN8-SB4-SS12-14	PC-HN8-SB4-SS12-14	PC-HN8-SB6-SS00-02	PC-HN8-SB6-SS00-02	PC-HN8-SB6-SS00-02	PC-HN8-SB6-SS00-02	PC-HN8-SB6-SS12-13	PC-HN8-SB6-SS12-13

0.00
Methylene chloride         2.70         0.00         B           Arsenic         0.43         0.00         (B           Lead         0.76         0.00         B           Zinc         7.30         0.00         B           Chloroform         0.59         0.00         B

Laboratory	СОМРИСНЕМ СОМРИСНЕМ
Date	08/17/93 08/17/93 08/27/93 08/27/93 08/27/93 08/27/93 08/27/93 08/27/93 08/27/93 08/27/93 08/27/93 08/27/93 08/27/93 08/27/93 08/27/93 08/27/93 08/27/93 08/27/93 08/27/93 08/27/93 08/27/93 09/08/93 09/08/93 09/08/93 09/08/93 09/08/93 09/08/93
Units	mg/kg ug/kg ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/
Qual	
Qualified "B" pena, Michigan RDL	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
Data Points ( a CRTC, Al <sub>I</sub> Result	5.80 35.00 0.26 32.00 4.40 0.60 2.00 7.00 10.60 10.60 5.00 5.00 5.00 5.00 6.23 1.00 77.80 5.00 6.23 1.00 77.80 5.00 6.23 1.00 77.80 5.00 6.23 1.00 77.80 61.60 61.
Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan Result RDL	Lead  Zinc  Methylene chloride  Zinc, Dissolved  Diethyl phthalate  Diethyl phthalate  Diethyl phthalate  Diethyl phthalate  Diethyl phthalate  Diethyl phthalate  Total Petroleum Hydrocarbons 0.40  Antimony  Zinc, Dissolved  Dissol
Analyte	Lead Zinc bis(2-Ethylhexyl Methylene chlory Zinc Zinc, Dissolved Diethyl phthalatt Phenol bis(2-Ethylhexyl Total Petroleum Antimony Beryllium Zinc Zinc, Dissolved bis(2-Ethylhexyl Total Petroleum 1, 1, 1-Trichloroe Methylene chlo Beryllium Zinc bis(2-Ethylhexyl Total Petroleum Nethylene chlo Beryllium Zinc bis(2-Ethylhexyl Total Petroleum Methylene chlo bis(2-Ethylhexyl Total Petroleum Dis(2-Ethylhexyl Total Petroleum Dis(2-Ethylhexyl Total Petroleum Dis(2-Ethylhexyl Total Petroleum Dis(2-Ethylhexyl Total Petroleum
Lab No	571686 571685 571685 574560 574569 574569 574569 574574 574574 574574 574574 574574 574576 574576 574575 574575 574575 574575 574575 574575 576289 576289 576289 576289
Sampleid	PC-HN8-SB8-SS10-12 PC-HN8-SB8-SS10-12 PC-HN8-SB8-SS10-12 PC-RT9-MW1-GW4 PC-RT9-MW1-GW4 PC-RT9-MW1-GW4 PC-RT9-MW1-GW4 PC-RT9-MW2-GW4 PC-RT9-MW2-GW4 PC-RT9-MW2-GW4 PC-RT9-MW2-GW4 PC-RT9-MW2-GW4 PC-RT9-MW2-GW4 PC-RT9-MW3-GW4 PC-RT9-MW4-GW4

Lab No Analyte Result RDL 574566 Toluene 0.22 0.00		MIANG, Alpena CRTC, Alpena, Michigan Result RDL 0.22 0.00	CRTC, Alı Result 0.22	nena, Michigan RDL 0.00	Qual	Units ug/l	Date 08/26/93	Laboratory
٠.	577702	Di-n-butyl phthalate	09.0	0.00	æ	Vgn	09/15/93	COMPUCHEM
27.	577702	bis(2-Ethylhexyl)phthalate	2.00	0.00	8	l/gn	09/15/93	COMPUCHEM
274	574584	Total Petroleum Hydrocarbons 1.10	ns 1.10	0.25	B	mg/l	08/26/93	COMPUCHEM
57.7	969225	Methylene chloride	0.19	0.00	B	l/gn	09/15/93	COMPUCHEM
577	969225	1,3-Dichlorobenzene	0.19	0.00	В	/gn	09/15/93	COMPUCHEM
577	577701	Di-n-butyl phthalate	1.00	0.00	В	l/gu	09/15/93	COMPUCHEM
577	577701	bis(2-Ethylhexyl)phthalate	4.00	0.00	B	√gn	09/15/93	COMPUCHEM
577	577714	Total Petroleum Hydrocarbon\$1.40	n <b>š</b> 1.40	0.25	В	mg/l	09/15/93	COMPUCHEM
522	522279	Chloroform	0.77	0.00	B	ug/kg	11/12/92	COMPUCHEM
522	522279	Methylene chloride	3.70	0.00	В	ug/kg	11/12/92	COMPUCHEM
522311	311	Arsenic	0.65	0.00	<b>B</b> 0	mg/kg	11/12/92	COMPUCHEM
522311	311	Barium	7.90	0.00	B()	mg/kg	11/12/92	COMPUCHEM
522311	311	Cobalt	1.20	0.00	В()	mg/kg	11/12/92	COMPUCHEM
522311	311	un un	490.00	0.00	B()	mg/kg	11/12/92	COMPUCHEM
522311	111	Sodium	81.40	0.00	B()	mg/kg	11/12/92	COMPUCHEM
522311	111	Vanadium	5.10	0.00	В()	mg/kg	11/12/92	COMPUCHEM
522311	111	Zinc	4.90	0.00	В	mg/kg	11/12/92	COMPUCHEM
522280	087	Chloroform	1.30	0.00	В	ug/kg	11/12/92	COMPUCHEM
522280	280	Methylene chloride	1.70	0.00	В	ug/kg	11/12/92	COMPUCHEM
522	522280	Methyl-t-Butyl Ether	5.20	0.00	B	ug/kg	11/12/92	COMPUCHEM
522	522312	Arsenic	0.67	0.00	B()	mg/kg	11/12/92	COMPUCHEM
522	522312	Barium	2.70	00.0	B()	mg/kg	11/12/92	COMPUCHEM
522	522312	Sodium	121.00	0.00	В()	mg/kg	11/12/92	COMPUCHEM
522	522312	Vanadium	3.10	00'0	B()	mg/kg	11/12/92	COMPUCHEM
522	522312	Zinc	3.50	0.00	B	mg/kg	11/12/92	COMPUCHEM
522	522281	Chloroform	1.50	0.00	В	ug/kg	11/12/92	COMPUCHEM
522	522281	Methylene chloride	2.00	00'0	В	ug/kg	11/12/92	COMPUCHEM
522281	281	1,3-Dichlorobenzene	0.41	0.00	В	ug/kg	11/12/92	COMPUCHEM
522281	.81	Toluene	0.20	0.00	В	ug/kg	11/12/92	COMPUCHEM

Laboratory	22 COMPUCHEM													792 COMPUCHEM	/92 COMPUCHEM	792 COMPUCHEM				•				3/92 COMPUCHEM		3/92 COMPUCHEM	3/92 COMPUCHEM	2/92 COMPUCHEM		11/12/92 COMPUCHEM
Units Date	mo/kg 11/12/92		mg/kg 11/12/92	mg/kg 11/12/92	mg/kg 11/12/92	mg/kg 11/12/92	ug/kg 11/12/92	ug/kg 11/12/92	ug/kg 11/12/92	ug/kg 11/12/92	ug/kg 11/12/92		me/kg 11/12/92	-				-	_	me/kg 11/13/92	me/kg 11/13/92	mg/kg 11/13/92	ug/kg 11/13/92	ug/kg 11/13/92	_				•	
Qual	CA CA	8	BO	30	8	<u>~</u>	, rc	, pr	n ee	<u> </u>	, pc	A C	3	2 K	) ¤	2 C	) K	<u> </u>	, cc	<u> </u>	æ	<u> </u>	<u> </u>	, cc	<u> </u>	, ta	ם מ	ם מ	<u> </u>	m
Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan Result RDL	9	0.00	00.0	00.0	0.00	90.0	00.0	00.0	00.0	00.0	0.00	00.0	0.00	0.00	0.00	0.00	00.0	0.00	00.0	00.0	00.0	0.0	0.00	0.00	00.0	0.00	00.0	0.00	0.00	0.00
Data Points ena CRTC, A	6	0.52	00.7	07.1	504.00	87.30	4.30	0.77	0.84	0.50	0.30	0.41	0.45	2.50	102.00	2.70	3.30	52.00	0.51	9.40	0.73	0.20	0.00	86.00	26.0	0.65	6.70	55.00	0.24	3.10
Table J - 12 MIANG, Alpo Analyte		Arsenic	Barium	Cobalt	Magnesium	Sodium	Zinc	Di-n-butyl phthalate	Chloroform	Methylene chloride	1,3-Dichlorobenzene	Toluene	Arsenic	Barium	Sodium	Vanadium	Zinc	Di-n-butyl phthalate	Chloroform	Methylene chloride	Arsenic	Beryllium	Zinc	Di-n-butyl phthalate	1,2-Dichlorobenzene	Arsenic	Zinc	Di-n-butyl phthalate	1,1,1-Trichloroethane	Chlorotorm
oN de l	Laboratoria de la companya de la com	522313	522313	522313	522313	522313	522313	522298	522284	522284	522284	522284	522314	522314	522314	522314	522314	522299	522588	522588	525558	525558	525558	522589	522574	525548	525548	522578	522277	522277
, , ,	Sampleid	PC-RT9-SB11-SS01-02	PC-RT9-SB11-SS12-14		PC-RT9-SB11-SS12-14	PC-RT9-SB12-SS01-02	PC-RT9-SB12-SS01-02	PC-RT9-SB12-SS01-02	PC-RT9-SB12-SS01-02	PC-RT9-SB12-SS01-02	PC-RT9-SB12-SS01-02	PC-RT9-SB12-SS05-07	PC-RT9-SB12-SS05-07	PC-RT9-SB12-SS05-07	PC-RT9-SB12-SS05-07	PC-RT9-SB7-SS01-02	PC-RT9-SB7-SS01-02													

		Table J - 1 MIANG, Al	Table J - 12 Data Points Qualifred "B" MIANG, Alpena CRTC, Alpena, Michigan	Qualified "B" Jena, Michigan				
Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-RT9-SB7-SS01-02	522309	Arsenic	0.65	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS01-02	\$22309	Barium	13.00	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS01-02	522309	Calcium	495.00	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS01-02	522309	Cobalt	1.30	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS01-02	522309	Magnesium	515.00	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS01-02	522309	Sodium	84.10	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS01-02	522309	Zinc	6.80	0.00	B	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS01-02	522294	Di-n-butyl phthalate	150.00	0.00	BJ	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522276	1,1,1-Trichloroethane	0.17	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522276	Chloroform	0.72	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522276	Methylene chloride	2.20	0.00	മ	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522276	1,2-Dichlorobenzene	80.0	0.00	Д	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522276	1,3-Dichlorobenzene	0.49	0.00	Д	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522276	Toluene	0.43	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522308	Arsenic	0.44	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522308	Barium	4.40	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522308	Calcium	495.00	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522308	Cobalt	1.40	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522308	Sodium	95.20	00.0	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522308	Zinc	2.00	00.0	B	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522293	Di-n-butyl phthalate	190.00	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS15-17	522271	1,1,1-Trichloroethane	0.10	00'0	В	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS15-17	522271	Chloroform	1.10	0.00	<b>2</b> 0	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS15-17	522271	1,2-Dichlorobenzene	0.19	00.0	В	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS15-17	522271	1,3-Dichlorobenzene	90.0	00'0	В	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS15-17	522271	1,4-Dichlorobenzene	0.55	00.0	മ	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS15-17	522271	Ethylbenzene	0.22	00.0	В	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS15-17	522271	Styrene	0.07	0.00	В	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS15-17	522271	Toluene	99.0	00.0	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS15-17	522300	Arsenic	06'0	0.00	B()	mg/kg	11/12/92	COMPUCHEM

Laboratory	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPLICHEM	COMPLICHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPLICHEM	COMPLICHEM	COMPLICHEM	COMPLICHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPLICHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPLICHEM	COMPLICHEM	COMPLICHEM	COMPLICHEM	COMPLICHEM	COMPUCHEM	•
Date	g 11/12/92	g 11/12/92	-			-		. –	_		_	-	-	-	_			_		-	-	4	_	_	_		_				•
Units	mg/kg	me/ke	mo/ko	mo/ko	May ng	ug/kg	ug/ng ng/kg	24/25 24/25	ug/ng ng/kg	10/kg		ug/ng ng/ng	ug/ng ng/hg	mg/m	IIIB/NB	mg/kg	mg/kg mg/kg	1118/NB	May Ng	ug/ng ng/hg	24/8m	ug/ng ng/hg	ug/ng ng/ko	ug/ng ng/hg	n kan	III K/ K K	III S/N S	mg/kg	mg/kg mg/kg	mg/ng mg/hg	III g/ kg
Qual	B()	<u>~</u>	Z C	) ¤	ם ב	ם ב	ממ	ם ב	ם מ	ם מ	ם מ	ם ם	ם ב	ם פ		00	00	) a	ם ם	םם	a a	ם ם	ם מ	ם מ	9 6			0	00	0	Ω
Qualified "B" pena, Michigan RDL	0.00	000	00:0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan Result RDL	2.80	112.00	12.00	3.30	3.60	320.00	0.20	1.10	4.80	0.14	0.28	0.20	0.38	0.56	0.65	2.80	105.00	3.40	3.40	240.00	0.34	0.97	0.07	01.1	0.47	0.71	5.60	358.00	1.20	89.30	4.50
Table J - I MIANG, Al Analyte		Dalluii.	Sodium	Vanadium	Zinc	Di-n-butyl phthalate	1,1,1-Trichloroethane	Chloroform	Methylene chloride	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Ethylbenzene	Toluene	Arsenic	Barium	Sodium	Vanadium	Zinc	Di-n-butyl phthalate	Chloroform	Methylene chloride	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Toluene	Arsenic	Barium	Calcium	Cobalt	Sodium	Zinc
Lab No		006776	522300	522300	522300	522285	522272	522272	522272	522272	522272	522272	522272	522272	522304	522304	522304	522304	522304	522289	522275	522275	522275	522275	522275	522307	522307	522307	522307	522307	522307
Sampleid		PC-RT9-SB7-SS15-17	PC-RT9-SB7-SS15-17	PC-RT9-SB7-SS15-17	PC-RT9-SB7-SS15-17	PC-RT9-SB7-SS15-17	PC-RT9-SB7-SS21-22	PC-RT9-SB7-SS21-22	PC-RT9-SB7-SS21-22	PC-RT9-SB7-SS21-22	PC-RT9-SB7-SS21-22	PC-RT9-SB7-SS21-22	PC-RT9-SB7-SS21-22	PC-RT9-SB7-SS21-22		ф PC-RT9-SB7-SS21-22		PC-RT9-SB7-SS21-22	PC-RT9-SB7-SS21-22	PC-RT9-SB7-SS21-22	PC-RT9-SB8-SS01-02	PC-RT9-SB8-SS01-02	PC-RT9-SB8-SS01-02	PC-RT9-SB8-SS01-02	PC-RT9-SB8-SS01-02	PC-RT9-SB8-SS01-02	PC-RT9-SB8-SS01-02	PC-RT9-SB8-SS01-02	PC-RT9-SB8-SS01-02	PC-RT9-SB8-SS01-02	PC-RT9-SB8-SS01-02

		Table J - 12 MIANG Alm	Table J - 12 Data Points Qualified "B" IIANG Alnena CRTC Alnena Michioa	Qualified "B" ena Michigan				
Sampleid	Lab No	Analyte	Result RDL	RDL	Qual	Units	Date	Laboratory
PC-RT9-SB8-SS01-02	522292	Di-n-butyl phthalate	210.00	0.00	BJ	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522273	1,1,1-Trichloroethane	0.11	0.00	В	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522273	Chloroform	98.0	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522273	Methylene chloride	2.90	0.00	В	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522273	1,2-Dichlorobenzene	0.11	0.00	В	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522273	1,3-Dichlorobenzene	80.0	0.00	В	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522273	1,4-Dichlorobenzene	0.77	0.00	В	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522273	Ethylbenzene	0.10	0.00	В	. ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522273	Styrene	0.0	0.00	В	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522273	Toluene	0.64	0.00	æ	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522305	Arsenic	99.0	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522305	Barium	2.30	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522305	Sodium	105.00	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522305	Vanadium	2.50	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522305	Zinc	3.40	0.00	Ф	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522290	Di-n-butyl phthalate	230.00	0.00	BJ	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS01-02	522274	1,1,1-Trichloroethane	0.23	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS01-02	522274	Chloroform	1.10	0.00	В	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS01-02	522274	Methylene chloride	4.20	0.00	В	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS01-02	522274	1,3-Dichlorobenzene	0.61	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS01-02	522274	Ethylbenzene	0.17	0.00	В	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS01-02	522274	Toluene	0.52	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS01-02	522306	Barium	10.20	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS01-02	522306	Sodium	97.30	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS01-02	522306	Zinc	5.60	0.00	æ	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS01-02	522291	Di-n-butyl phthalate	230.00	0.00	В	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS15-17	522278	Chloroform	1.80	0.00	В	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS15-17	522278	Methylene chloride	1.50	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS15-17	522310	Arsenic	0.51	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS15-17	522310	Barium	3.70	0.00	B()	mg/kg	11/12/92	COMPUCHEM

	Date Laboratory	11/12/92 COMPUCHEM	11/12/92 COMPUCHEM	11/12/92 COMPUCHEM	11/12/92 COMPUCHEM	08/09/93 COMPUCHEM			08/09/93 COMPUCHEM					08/09/93 COMPUCHEM							08/15/93	08/15/93	08/15/93			08/15/93	08/12/93	08/15/93	•	08/10/93 COMPUCHEM	08/10/93 COMPUCHEM
	Units	mg/kg	mg/kg	mg/kg	ug/kg	ug/kg	ug/kg	ug/kg	mg/kg	ug/kg	ug/kg	ug/kg	mg/kg	ug/kg	ug/kg	ug/kg	mg/kg	ug/kg	ug/kg	ug/kg	ug/kg	mg/kg	mg/kg	ug/kg	ug/kg	mg/kg	mg/kg	mg/kg	/gn	l/gn	√gn
	Qual	B()	B()	B	£	В	В	В	В	B	В	В	В	В	B	В	В	В	В	B	В	B	В	B	В	മ	В	В	B	B	B
Qualified "B" pena, Michigan	RDL	0.00	00.00	0.00	0.00	00.0	00'0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan	Result	138.00	4.10	3.90	210.00	0.07	1.00	3.00	11.40	0.27	0.91	2.50	3.80	0.10	0.83	1.80	3.80	0.05	0.79	3.40	0.25	1.40	15.30	0.92	0.11	1.70	1.40	9.60	0.76	0.12	44.40
Table J - I MIANG, Al <sub>I</sub>	Analyte	Sodium	Vanadium	Zinc	Di-n-butyl phthalate	1,1,1-Trichloroethane	Chloroform	Methylene chloride	Zinc	1,1,1-Trichloroethane	Chloroform	Methylene chloride	Zinc	1,1,1-Trichloroethane	Chloroform	Methylene chloride	Zinc	1,1,1-Trichloroethane	Chloroform	Methylene chloride	Toluene	Lead	Zinc	Chloroform	1,4-Dichlorobenzene	Arsenic	Lead	Zinc	1,2-Dichlorobenzene	Toluene	Antimony
	Lab No	522310	522310	522310	522295	569291	569291	569291	569297	569292	569292	569292	569298	569293	569293	569293	569299	571322	571322	571322	571322	571352	571352	571330	571330	571379	571379	571379	569853	569853	569862
	Sampleid	PC-RT9-SB9-SS15-17	PC-RT9-SB9-SS15-17	PC-RT9-SB9-SS15-17	PC-RT9-SB9-SS15-17	PC-BG1-SB1-SS00-01	PC-BG1-SB1-SS00-01	PC-BG1-SB1-SS00-01	PC-BG1-SB1-SS00-01	PC-BG1-SB1-SS02-03	PC-BG1-SB1-SS02-03	PC-BG1-SB1-SS02-03	PC-BG1-SB1-SS02-03	PC-BG1-SB1-SS09-10	PC-BG1-SB1-SS09-10	PC-BG1-SB1-SS09-10	PC-BG1-SB1-SS09-10	PC-BG1-SB2-SS00-01	PC-BG1-SB2-SS00-01	PC-BG1-SB2-SS00-01	PC-BG1-SB2-SS00-01	PC-BG1-SB2-SS00-01	PC-BG1-SB2-SS00-01	PC-BG1-SB2-SS02-03	PC-BG1-SB2-SS02-03	PC-BG1-SB2-SS02-03	PC-BG1-SB2-SS02-03	PC-BG1-SB2-SS02-03	PC-PW-PW1-GW4	PC-PW-PW1-GW4	PC-PW-PW1-GW4

	Laboratory	COMPUCHEM	COMPUCHEM	COMPUCHEM		COMPUCHEM	COMPUCHEM		COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM			COMPUCHEM		COMPUCHEM			COMPUCHEM	COMPUCHEM		3 COMPUCHEM	3 COMPUCHEM	3 COMPUCHEM	3 COMPUCHEM	3 COMPUCHEM	3 COMPUCHEM	3 COMPUCHEM	COMBITCHEM
	Date	08/10/93	08/10/93	08/10/93	08/10/93	08/10/93	08/10/93	08/10/93	08/10/93	08/10/93	08/10/93	08/10/93	08/10/93	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92	07/29/93	07/31/93	07/31/93	08/01/93	08/01/93	08/01/93	08/12/93	08/12/93	08/12/93
	Units	l/gu	√gn	/Sn	l/gu	l/gu	/gn	l/gn	l/gn	l/gu	l/gu	/gn	/gn	/gn	l/gn	√gn	l∕gu	l/gn	l/gn	/gn	/gn	/gn	/gn	l/gn	//gn	√gn	l/gn	/gn	√gn	l∕gu	]/ø[[
	Qual	()B	B	В	Ω	മ	Ω	В	В	В	B	æ	Д	B	В	В	()B	В	B	B	В	()B	æ	В	()B	В	æ	æ	B	В	m
Table J - 12 Data Points Qualified "B" IIANG. Alpena CRTC, Alpena, Michigar	RDL	0.00	0.00	0.00	0.00	00.00	0.00	0.00	00.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	000
Data Points CRTC, A	Result	38.50	4.60	1.00	0.31	0.36	0.17	4.10	09.0	0.23	0.38	0.18	06.0	0.17	2.40	00.69	5.30	0.20	2.60	2.00	3.00	5.30	0.11	0.13	4.60	0.07	0.29	00.6	0.29	0.07	0 63
Table J - 12 Data Points Qualified "B" MIANG. Albena CRTC, Albena, Michigan	Analyte	Antimony, Dissolved	Copper	bis(2-Ethylhexyl)phthalate	1,2-Dichlorobenzene	1,4-Dichlorobenzene	Toluene	Copper	bis(2-Ethylhexyl)phthalate	1,2-Dichlorobenzene	1,4-Dichlorobenzene	Toluene	bis(2-Ethylhexyl)phthalate	Chloroform	Methylene chloride	bis(2-Ethylhexyl)phthalate	Zinc	Chloroform	Methylene chloride	Diethyl phthalate	bis(2-Ethylhexyl)phthalate	Zinc	Methylene chloride	Toluene	Copper	1,2-Dichlorobenzene	Toluene	bis(2-Ethylhexyl)phthalate	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1 A. Dichlorohenzene
	Lab No	569867	569862	569874	569854	569854	569854	569863	269877	98698	98695	269860	569883	522051	522051	522053-EB1	\$25534	522051-EB2	522051-EB2	522053	522053	525534-EB2	567253	567576	567579	567708	\$67708	267709	570413	570413	570413
	Sampleid	PC-PW-PW1-GW4	PC-PW-PW1-GW4	PC-PW-PW1-GW4	PC-PW-PW2-GW4	PC-PW-PW2-GW4	PC-PW-PW2-GW4	PC-PW-PW2-GW4	PC-PW-PW2-GW4	PC-PW-PW3-GW4	PC-PW-PW3-GW4	PC-PW-PW3-GW4	PC-PW-PW3-GW4	PC-EB01	PC-EB01	PC-EB01	PC-EB01	PC-EB02	PC-EB02	PC-EB02	PC-EB02	PC-EB02	PC-ER01	PC-ER03	PC-ER03	PC-ER04	PC-ER04	PC-ER04	PC-ER05	PC-ER05	PC_FR05

Laboratory	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPLICHEM	COMPLICHEM	COMPLETEN	COMPOCHEM	COMPOCIEM	COMPOCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPLICHEM	COMPLICHEM	COMPLICHEM	COMPLICHEM	COMPLICHEM	COMPLICHEM	COMPLICHEM	COMPLICHEM	COMPLICHEM	COMPLICHEM	COMPOCITION	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPLICHEM	COMPUCHEM	COMPUCHEM	
Date	08/12/93	08/12/93	08/12/93	09/12/22	06/17/22	08/17/95	08/15/93	08/17/93	08/15/93	08/15/93	08/15/93	08/17/93	08/17/93	08/17/93	08/17/93	00/1/03	06/17/03	08/17/93	08/17/03	08/17/93	08/1//93	08/11/93	08/17/93	06/1//93	06/24/93	08/24/93	08/24/93	08/26/93	08/26/93	£6/9C/8U	56/97/80	66/97/80	2/127100
Units	/gn	ne/l	V 01	ug/1	ng/a	ng/l	ng/l	ng/l	/gn	√gn	√gn	/gn	ue/I	Voll	/ en	ng/1	I/Sn	ng/I	ug/1	ng/I	ng/l	l/gu	l∕8n	l/gu	ı/gn	ng/l	/gn	ng/l	10/	700	ng/l	l/Sm	ug/1
Qual	В	œ	<b>a</b> 0	9	ום	2	<b>~</b>	8	æ	В	В	8	æ	ď	a p	ם ¢	9 0	Σt	o t	<b>2</b> 6	9 0	<b>2</b> 2 (	zo t	מנ	n ı	m	В	æ	ď	ם	Q C	a) a	a
Qualified "B" pena, Michigan RDL	0.00	000	00.0	0.00	0.00	0.00	0.00	0.00	0.00	00.0	00.0	0.00	000	00.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	00.0	000	000	0.00	0.00	0.00	0.00
ata Points ( CRTC, Alp Result	0.16	05 09	00.00	36.20	0.25	3.00	76.90	8.00	1.40	0.18	4.00	92.0	070	0.40	0.57	0.12	4.50	0.99	0.08	0.39	4.50	86.0	0.07	0.28	0.25	0.19	5.00	0.07	6.0	67.0	5.70	08.6	1.00
Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan Analyte RDL	Toluene		Antimony	Antimony, Dissolved	Toluene	bis(2-Ethylhexyl)phthalate	Antimony, Dissolved	bis(2-Ethylhexyl)phthalate	1.2-Dichlorobenzene	Toluene	his (2-Ethylhexyl) phthalate	Motherland chloride		1,2-Dichlorobenzene	1,4-Dichlorobenzene	Toluene	Copper	Methylene chloride	Benzene	Toluene	Copper	Methylene chloride	Benzene	Toluene	1,4-Dichlorobenzene	Toluene	his (2-Fthylhexyl) nhthalate	1 1 Tri-blanchone	I,I,I-Incmordenanc	Methylene chloride	Copper, Dissolved	Zinc	Di-n-butyl phthalate
Lab No	570.413	3/0413	570450	570463	571263	571274	571310	571269	192178	571261	102116	2/71/6	2/16/2	571672	571672	571672	571674	571952	571952	571952	571957	571951	571951	571951	573664	\$73664	57366	5005/5	5/4364	574364	574399	574382	574418
Sampleid		PC-ER05	PC-ER05	PC-ER05	PC-FR07	DC ED07	DC-EROS	50 ED 08	rc-enus	PC-ER09	PC-ERU9	PC-ER09	PC-ER10	PC-ER10	PC-ER10	PC-FR10	PC-ER10	PC-ER11	PC-ER11	PC-ER11	PC-FR11	PC.FR12	PC-ER12	PC-ER12	PC-FR13	1 C-ENTS	rc-eris	PC-EK13	PC-ER14	PC-ER14	PC-ER14	PC-ER14	PC-ER14

		Table J - 12 Data Points Qualified "B"	Oata Points	Qualified "B"				
Sampleid	Lab No	MIANG, Alpena CAIC, Alpena, Michigan Analyte RDL Result RDL	Result	pena, micnigar RDL	Qual	Units	Date	Laboratory
PC-ER14	574418	Diethyl phthalate	1.00	0.00	Ŕ	/gn	08/26/93	COMPUCHEM
PC-ER14	574418		5.00	0.00	В	l/gu	08/26/93	COMPUCHEM
PC-ER15	574349	Methylene chloride	0.15	0.00	B	l/gu	08/26/93	COMPUCHEM
PC-ER15	574349	1,2-Dichlorobenzene	99.0	0.00	В	/gn	08/26/93	COMPUCHEM
PC-ER15	574349	Ethylbenzene	0.10	0.00	B	l/gn	08/26/93	COMPUCHEM
PC-ER15	574349	Toluene	0.17	0.00	В	l/gn	08/26/93	COMPUCHEM
PC-ER15	574373	Zinc	7	0.00	B	l/gu	08/26/93	COMPUCHEM
PC-ER15	574401	bis(2-Ethylhexyl)phthalate		0.00	B	l/gn	08/26/93	COMPUCHEM
PC-ER16	574366	1,1,1-Trichloroethane	0.10	0.00	В	/gn	08/26/93	COMPUCHEM
PC-ER16	574366	Methylene chloride	0.29	0.00	В	l/gn	08/26/93	COMPUCHEM
PC-ER16	574388	Zinc	8.80	0.00	0B	ng/l	08/26/93	COMPUCHEM
PC-ER16	574423	bis(2-Ethylhexyl)phthalate	15.00	0.00	മ	l/gu	08/26/93	COMPUCHEM
PC-ER17	574973	1,1,1-Trichloroethane		0.00	B	ng/l	08/29/93	COMPUCHEM
PC-ER17	574973	Chloroform	0.17	0.00	B	//gn	08/29/93	COMPUCHEM
PC-ER17	574973	Methylene chloride	0.79	0.00	В	/gn	08/29/93	COMPUCHEM
PC-ER17	574978	Zinc		0.00	<b>9</b> 0	l/gn	08/29/93	COMPUCHEM
PC-ER17	576997	bis(2-Ethylhexyl)phthalate	5.00	0.00	B	l/gn	09/12/93	COMPUCHEM
PC-ER18	576688	Methylene chloride	0.30	0.00	В	l∕gu	09/10/93	COMPUCHEM
PC-ER18	576688	1,2-Dichlorobenzene	0.38	0.00	B	l∕gu	09/10/93	COMPUCHEM
PC-ER18	576688	1,3-Dichlorobenzene	0.18	0.00	В	√gn	09/10/93	COMPUCHEM
PC-ER18	576688	Toluene	0.39	0.00	æ	√gn	09/10/93	COMPUCHEM
PC-ER18	576674	Zinc	08.9	0.00	<b>OB</b>	/gn	09/10/93	COMPUCHEM
PC-ER18	216690	bis(2-Ethylhexyl)phthalate	10.00	0.00	В	l/gn	09/10/93	COMPUCHEM
PC-ER19	576962	Chloroform	0.17	0.00	മ	/gn	09/13/93	COMPUCHEM
PC-ER19	576962	Methylene chloride	0.77	0.00	В	l/gn	09/13/93	COMPUCHEM
PC-ER19	576962	1,3-Dichlorobenzene	0.18	0.00	В	l/gu	09/13/93	COMPUCHEM
PC-ER19	576962	1,4-Dichlorobenzene	0.59	0.00	В	/gn	09/13/93	COMPUCHEM
PC-ER19	576962	Toluene	0.22	0.00	B	/gn	09/13/93	COMPUCHEM
PC-ER19	576971	bis(2-Ethylhexyl)phthalate	14.00	0.00	B	l/gn	09/13/93	COMPUCHEM
PC-ER20	577481	Methylene chloride	0.30	0.00	В	ng/l	09/14/93	COMPUCHEM

Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan

		MIANG, Alpena CKIC, Alpena, Michigan	CKIC, AIF	ena, Micingan				,
Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
סרמם סת	577481	1 3-Dichlorobenzene	0.15	0.00	В	l/gn	09/14/93	COMPUCHEM
rc-enzu	577491	1 4. Dichlorobenzene	0.37	0.00	В	l/gn	09/14/93	COMPUCHEM
PC-EK20	104/10	1,4-Diemolocuicono	0.24	000	œ	ne/l	09/14/93	COMPUCHEM
PC-ER20	2//481		¥ 00	00.0	<b>1</b> 12	Vo.,	09/14/93	COMPUCHEM
PC-ER20	577482	bis(2-Ethylhexyl)phthalate	3.00	0.00	ם	1/Sm	09/15/03	COMPLICHEM
PC-ER21	578082	Methylene chloride	0.60	0.00	ום	ı,gn	05/17/50	COMPLICIEN
PC-ER21	578085	bis(2-Ethylhexyl)phthalate	4.00	0.00	<b>m</b> i	ng/l	09/13/93	COMPOCHEM
PC-FB01	522262	Chloroform	86.0	0.00	æ	ng/l	11/13/92	COMPOCHEM
PC-FB01	566786	Methylene chloride	2.00	0.00	В	//gn	07/28/93	COMPUCHEM
DC-FR01	\$22262	Methylene chloride	3.70	0.00	В	//gn	11/13/92	COMPUCHEM
PC-FB01	69006	1 2-Dichlorobenzene	1.40	0.00	B	√gn	11/13/92	COMPUCHEM
rc-rbul	201176	Tolliene	0.22	0.00	B	l∕gn	11/13/92	COMPUCHEM
FC-FB01	707776	Conner	4 10	00.0	OB	l/gn	07/28/93	COMPUCHEM
FC-FB01	20070	Copper Light Bearifulth alate	2 00 6	000	e M	ug/l	11/13/92	COMPUCHEM
PC-FB01	277763	018(2-Ethymexy)/phinalate	00.7	00.0	, C	/on	11/12/92	COMPUCHEM
F PC-FB01	525534-FB1	Zinc	0.50	0.00	ָ ב	1 6 T	20/00/20	COMPLICHEM
PC-FB02	8/6998	Methylene chloride	0.14	0.00	<b>x</b> i (	ng/I	56/67/10	COMPLETIEN
PC-FB02	88699\$	Antimony	40.40	0.00	В	/gn	07/29/93	COMPUCHEM
PC-FR02	\$22263-FB2	Diethyl phthalate	1.00	0.00	B	/gn	11/13/92	COMPUCHEM
DC_FB02	\$22263-FB2	bis(2-Ethylhexyl)phthalate	8.00	0.00	B	√gn	11/13/92	COMPUCHEM
FC-1 D02	525534-FR2	Zinc	23.00	0.00	B	l/gn	11/12/92	COMPUCHEM
rc-rb0z	260858	1 2-Dichlorohenzene	0.24	0.00	B	l/gn	08/10/93	COMPUCHEM
rc-rbos	858095	Toluene	0.14	0.00	<b>m</b>	/gn	08/10/93	COMPUCHEM
rc-rbos	959695 769864	Conner	7.90	0.00	()B	l/gn	08/10/93	COMPUCHEM
rC-rb03	577080	Toluene	0.11	0.00	B	/gn	08/23/93	COMPUCHEM
rc-rbo4	572170	his (2-Ethylhoxyl) nhthalate	4 00	0.00	B	ng/l	08/23/93	COMPUCHEM
FC-FB04	971676	Renzene	90 0	0.00	B	ng/l	08/23/93	COMPUCHEM
PC-FB03	09/7/6		00.0		Œ	Vou.	108/23/93	COMPUCHEM
PC-FB05	272986	Toluene	0.40	0.00	2 0	, Q	08/23/03	COMPLICHEM
PC-FB05	572988	Copper	4.50	0.00	a a	n k/1	00/07/00	COMPLICIEN
PC-FB05	573130	bis(2-Ethylhexyl)phthalate	11.00	0.00	ומ	ng/I	08/23/93	COMPLICITEM
PC-FB06	570192	1,1,1-Trichloroethane	0.21	0.00	<b>x</b>	ng/l	08/11/93	COMPUCATION
PC-FB06	570192	Methylene chloride	0.14	0.00	æ	ng/l	08/11/93	COMPOCHEM

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	Laboratory	СОМРИСНЕМ	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM
	Date	08/11/93	09/01/93	09/07/93	09/07/93	09/07/93	09/07/93	09/10/93	07/28/93	07/28/93	07/28/93	07/27/93	07/29/93	11/12/92	07/29/93	11/12/92	07/31/93	11/13/92	11/13/92	08/01/93	08/09/93	08/09/93	08/11/93	08/11/93	08/12/93	08/13/93	08/13/93	08/17/93	08/17/93	08/17/93	08/17/93
	Units	√gn	/gn	l/gn	ng/l	l/gu	l/gu	/gn	/gn	l/gu	l/gn	/gn	l/gn	l/gn	l/gn	l∕gn	/gn	l/gn	l/gn	√gn	l/gn	l/gn	l/gn	l/gn	l/gn	l/gn	l/gn	l/gn	/gn	ng/l	l/gn
	Qual	В	В	B	В	В	В	В	В	В	В	В	В	В	В	В	В	В	В	В	В	В	В	B	В	8	B	B	B	B	B
Qualified "B" pena, Michigan	RDL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	00'0	0.00	0.00	00'0	0.00	00'0	0.00	0.00
ata Points (	Result	9.00	0.58	0.36	0.26	0.23	8.10	00'9	0.25	98.0	0.13	60'0	29.0	0.49	0.12	0.19	0.47	0.14	1.10	91.0	0.56	0.12	0.17	0.19	0.24	0.05	0.22	0.57	0.19	0.49	0.38
Table J - 12 Data Points Qualified "B" MIANG, Albena CRTC, Albena, Michigan	Analyte	bis(2-Ethylhexyl)phthalate	Methylene chloride	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Selenium	bis(2-Ethylhexyl)phthalate	Methylene chloride	1,2-Dichlorobenzene	1,4-Dichlorobenzene	1,3-Dichlorobenzene	1,2-Dichlorobenzene	1,2-Dichlorobenzene	Toluene	Toluene	Toluene	Chloroform	Methylene chloride	Toluene	1,2-Dichlorobenzene	Toluene	Methylene chloride	Toluene	Methylene chloride	Methylene chloride	Toluene	Methylene chloride	1,2-Dichlorobenzene	1,4-Dichlorobenzene	Toluene
	Lab No	570186	576295	576295	576295	576295	576296	576663	566832	566832	566832	266977	567263	522260	567263	522260	567575	522260-TB5	522260-TB5	567712	269290	269290	570212	570212	570416	570777	570777	571711	571711	571711	571711
	Sampleid	PC-FB06	PC-FB07	PC-FB07	PC-FB07	PC-FB07	PC-FB07	PC-FB07	PC-TB01	PC-TB01	PC-TB01	PC-TB02	PC-TB03	PC-TB03	F PC-TB03	_	PC-TB04	PC-TB05	PC-TB05	PC-TB05	PC-TB06	PC-TB06	PC-TB08	PC-TB08	PC-TB09	PC-TB10	PC-TB10	PC-TB13	PC-TB13	PC-TB13	PC-TB13

Laboratory	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPLICHEM	COMPLICHEM	COMPLICHEM	COMPLICHEM	COMPUCHEM	
Date	08/17/93	08/17/93	08/17/93	08/23/93	08/23/93	08/23/93	08/23/93	08/24/93	08/24/93	08/24/93	08/24/93	08/24/93	08/26/93	08/27/93	08/77/93	08/27/93	09/08/93	09/08/93	09/08/93	09/08/93	09/09/93	09/09/93	09/09/93	09/10/93	09/10/93	00/10/03	09/10/93	09/13/03	09/13/03	09/13/93	COCTO
Units	ug/l	Van	/on	1,9m	1,6,1	ug/i	ne/I	Von	/on	l/on	Von	10/	/9n	1.8m	1/8m	ug/I	l/Sm	1/9n	l/on	1.0 J	l/an	/gn	1/411	Von	l'en	ug'i	ngu V	1/Sin	ng/1	ng/1	n/Sm
Qual	œ	ı cc	a c	ם מ	םם	ם ב	o a	a ca	) C	) M	, <b>c</b> c	α <b>α</b>	ם מ	ם ב	ם ב	d ta	o e	<u> </u>	ממ	n m	ı m	<u>~</u>	, E	ם מ	j a	ם ב	מנ	ם ב	ם	ם ם	۵
Qualified "B" Jena, Michigan RDL	00 0	00.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	00.0	0.00	0.00	0.00	0.00	0.00	00.0	8.0	0.00	0.00	00.0	00.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan Result RDL	77.0	t 00.0	0.09	0.31	0.26	0.07	0.24	17.0	0.13	0.09	0.0	1.70	0.21	0.42	0.26	0.50	0.23	0.52	16.0	0.30	0.27	0.23	0.11	77.0	0.58	0.15	0.32	0.14	0.36	0.11	0.70
Table J - 12 MIANG, Alp Analyte		Methylene chloride	Benzene	Toluene	1,4-Dichlorobenzene	Benzene	Toluene	Toluene	Toluene	Chloroform	Methylene chloride	1,2-Dichlorobenzene	Toluene	Methylene chloride	Methylene chloride	1,4-Dichlorobenzene	Toluene	Methylene chloride	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,2-Dichlorobenzene	I,3-Dichlorobenzene	1,4-Dichlorobenzene	Methylene chloride	1,2-Dichlorobenzene	1,4-Dichlorobenzene	Toluene	Methylene chloride	1,3-Dichlorobenzene	1,4-Dichlorobenzene
Lab No		571950	571950	571950	572976	572975	572976	572975	573652	574054	574054	574054	574054	574369	574568	574568	574568	576297	576297	576297	576297	576533	576533	576533	816709	576709	576709	576709	576951	576951	576951
Samuleid	oun protein	PC-TB14	PC-TB14	PC-TB14	PC-TB15	PC-TB15	PC-TB15	PC-TB15	PC-TB16	PC-TB17	PC-TB17	PC-TB17	PC-TB17	F. PC-TB18		PC-TB19	PC-TB19	PC-TB22	PC-TB22	PC-TB22	PC-TB22	PC-TB23	PC-TB23	PC-TB23	PC-TB24	PC-TB24	PC_TB24	PC-TB24	PC-TB25	PC-TB25	PC-TB25

	Laboratory	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM
	Date	09/13/93	09/14/93	09/14/93	09/14/93	09/14/93	09/15/93	09/15/93	09/15/93	09/15/93
	Units	l/gu	/gn	l/gn	l/gn	/gn	/gn	l/gn	l/gn	l/gn
	Qual	В	B	В	В	В	В	В	В	В
Qualified "B" nena, Michigan	RDL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Table J - 12 Data Points Qualified "B" MIANG, Alpena CRTC, Alpena, Michigan	Result	0.18	0.39	0.32	0.21	0.19	0.18	0.30	0.67	0.58
Table J - 12 MIANG, Alp	Analyte	Toluene	Methylene chloride	1,2-Dichlorobenzene	1,4-Dichlorobenzene	Toluene	Methylene chloride	1,4-Dichlorobenzene	Methylene chloride	1,3-Dichlorobenzene
	Lab No	576951	577551	577551	577551	577551	577703	577703	278080	578080
	Sampleid	PC-TB25	PC-TB26	PC-TB26	PC-TB26	PC-TB26	PC-TB27	PC-TB27	PC-TB28	PC-TB28

		Table J-13 Field QC Cross Reference	d QC Cross Ref	ference Michioan		
Sample ID	Matrix	Date	Field Blank	Field Blank	Trip Blank	Equipment Rinsate
MWI-GWA	GROINDWATE	09/15/93	PC-FB7		PC-TB27	PC-ER20
	GROUNDWATE	09/14/93	PC-FB7		PC-TB26	PC-ER20
	GROUNDWATE	09/14/93	PC-FB7		PC-TB26	PC-ER20
FC-F1-MW12-GW4	GROUNDWATE	09/14/93	PC-FB7		PC-TB26	PC-ER20
PC-F1-MW13-CW4	GROUNDWATE	09/15/93	PC-FB7		PC-TB27	PC-ER20
	GROUNDWATE	09/09/93	PC-FB7		PC-TB23	PC-ER18
PC-F1-MW2-GW4	GROUNDWATE	09/10/93	PC-FB7		PC-TB24	PC-ER18
DC D1 MWA-GWA	GROUNDWATE	09/10/93	PC-FB7		PC-TB24	PC-ER18
PC-FILMWGW4	GROUNDWATE	09/15/93	PC-FB7		PC-TB28	PC-ER21
DC D1 CB10-C800-02	SOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER15
PC-F1-3B10-3300-02	SUBSOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER15
DC-01-1-3D10-3303-04	SOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER15
DC-01-5201-520-52	SUBSOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER15
PC-91-2B11-25-01	SOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER15
PC-P1-CR13-SS00-02	SOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER15
DC D1 CR13-CS03-04	SUBSOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER15
DC_D1_CRA_CS00_01	SOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER13
DC D1_CR4_CS02_01	SUBSOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER13
PC-P1-CB5-CS00-02	SOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER13
PC-P1-CR5-CS03-04	SUBSOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER13
PC-P1-CR6-SS00-02	SOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER13
PC-P1-SB6-SS03-04	SUBSOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER13
pC-D1-CB7-SC00-07	SOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER13
DC D1-CR7-CC03-04	SUBSOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER13
PC-F1-5257-54 PC-P1-688-6600-07	SOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER13
DC D1 CB8-CC03-04	SUBSOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER13
DC D1 CB0-CC00-01	SOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER15
DC D1-CB9-CC03-04	SUBSOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER15
PC-11-3D/-535-54	SEDIMENT	09/13/93	PC-FB7		PC-TB25	PC-ER19
PC-P1-SD002	SEDIMENT	09/13/93	PC-FB7		PC-TB25	PC-ER19

		Table J-13 Field QC Cross Reference MIANG, Alpena CRTC, Albena, Michigan	d QC Cross Re CRTC, Alpena.	ference Michigan		
Sample ID	Matrix	Date	Field Blank	Field Blank	Trip Blank	Equipment Rinsate
		60, 61, 66			Section Control	ָ בַּ
PC-P1-SD003	SEDIMENT	09/13/93	PC-FB7		PC-1825	PC-EKI9
PC-P1-SD005	SEDIMENT	09/13/93	PC-FB7		PC-TB25	PC-ER19
PC-MP2-MW1-GW4	GROUNDWATE	08/10/93	PC-FB1		PC-TB7	PC-ERSF
PC-MP2-MW2-GW4	GROUNDWATE	08/15/93	PC-FB6		PC-TB12	PC-ER8
PC-MP2-MW3-GW4	GROUNDWATE	08/16/93	PC-FB6		PC-TB12	PC-ER8
PC-MP2-MW4-GW4	GROUNDWATE	08/16/93	PC-FB6		PC-TB12	PC-ER8
PC-MP2-MW5-GW4	GROUNDWATE	08/29/93	PC-FB5		PC-TB20	PC-ER17
PC-MP2-MW5-GW4-RE	GROUNDWATE	09/16/93	PC-FB7		PC-TB28	PC-ER17
PC-MP2-MW6-GW4	GROUNDWATE	09/09/93	PC-FB7		PC-TB23	PC-ER18
PC-MP2-MW7-GW4	GROUNDWATE	09/09/93	PC-FB7		PC-TB23	PC-ER18
PC-MP2-SB10-SS00-01	SOIL	09/13/93	PC-FB7		PC-TB25	PC-ER19
PC-MP2-SB10-SS03-04	SUBSOIL	09/13/93	PC-FB7		PC-TB25	PC-ER19
PC-MP2-SB2-SS00-02	SUBSOIL	08/17/93	PC-FB3	PC-FB6	PC-TB14	PC-ER12
PC-MP2-SB2-SS04-05	SUBSOIL	08/11/93	PC-FB3	PC-FB6	PC-TB14	PC-ER12
PC-MP2-SB3-SS00-02	SUBSOIL	08/11/93	PC-FB3	PC-FB6	PC-TB14	PC-ER10
PC-MP2-SB3-SS04-05	SUBSOIL	08/11/93	PC-FB3	PC-FB6	PC-TB14	PC-ER10
PC-MP2-SB4-SS00-02	SUBSOIL	08/17/93	PC-TB3	PC-FB6	PC-TB14	PC-ER12
PC-MP2-SB4-SS04-05	SUBSOIL	08/11/93	PC-TB3	PC-FB6	PC-TB14	PC-ER12
PC-MP2-SB5-SS00-02	SUBSOIL	08/17/93	PC-TB3	PC-FB6	PC-TB14	PC-ER12
PC-MP2-SB5-SS04-05	SUBSOIL	08/17/93	PC-TB3	PC-FB6	PC-TB14	PC-ER12
PC-MP2-SB6-SS00-02	SOIL	08/15/93	PC-FB3	PC-FB6	PC-TB12	PC-ER9
PC-MP2-SB6-SS05-06	SUBSOIL	08/15/93	PC-FB3	PC-FB6	PC-TB12	PC-ER9
PC-MP2-SB7-SS00-02	SOIL	08/15/93	PC-FB3	PC-FB6	PC-TB12	PC-ER9
PC-MP2-SB7-SS05-06	SUBSOIL	08/15/93	PC-FB3	PC-FB6	PC-TB12	PC-ER9
PC-MP2-SB8-SS00-02	SOIL	08/15/93	PC-FB3	PC-FB6	PC-TB12	PC-ER10
PC-MP2-SB8-SS05-06	SUBSOIL	08/15/93	PC-FB3	PC-FB6	PC-TB12	PC-ER10
PC-MP2-SB9-SS03-04	SUBSOIL	08/16/93	PC-FB3	PC-FB6	PC-TB13	PC-ER10
PC-CG3-MW1-GW4	GROUNDWATE	08/15/93	PC-FB6		PC-TB12	PC-ER8
PC-CG3-MW2-GW4	GROUNDWATE	08/25/93	PC-FB5		PC-TB17	PC-ER14
PC-CG3-MW3-GW4	GROUNDWATE	08/25/93	PC-FB5		PC-TB17	PC-ER14

Matrix	Table J-13 Field QC Cross Reference MIANG, Alpena CRTC, Alpena, Michigan Date Field Field Blank Blank	QC Cross Ref RTC, Alpena, P Field Blank	erence Michigan Field Blank	Trip Blank	Equipment Rinsate
					i i
SPOININWATE.	08/25/93	PC-FB5		PC-TB17	PC-EK14
CONCOUNTATE	08/26/93	FC-FB5		PC-TB18	PC-ER14
CROUNTS WATE	09/10/93	PC-FB7		PC-TB24	PC-ER18
GROUNDWATE	09/13/03	PC-FB7		PC-TB25	PC-ER18
GROUNDWATE	08/76/93	PC-FB4	PC-FB5	PC-TB18	PC-ER16
SOIL	60/96/90	PC-FR4	PC-FB5	PC-TB19	PC-ER16
SUBSOIL	08/26/93	PC_FR4	PC-FB5	PC-TB18	PC-ER16
SUBSOIL	60/96/00	PC-FR4	PC-FB5	PC-TB18	PC-ER16
SOIL	60/96/80	DC-FR4	PC-FB5	PC-TB19	PC-ER16
SUBSOIL	60/96/00	PC-FR4	PC-FB5	PC-TB18	PC-ER16
SUBSOIL	06/20/03	DC-FR4	PC-FB5	PC-TB18	PC-ER16
SOIL	CC/07/90	DC EBA	PC.FR5	PC-TB19	PC-ER16
SUBSOIL	66/57/80	rC-rb4	201	PC-TB13	PC-ER8
GROUNDWATE	08/1/93	rC-rb0		PC-TRR	PC-ERSE
GROUNDWATE	08/11/93	FC-FB0		PC-TR8	PC-ERSF
GROUNDWATE	08/11/93	PC-FB0		DC_TRO	PC-FRSF
GROUNDWATE	08/17/93	PC-FB0	רמין טע	DC.TR2	PC-FR1
SEDIMENT	07/29/93	PC-FB1	PC-FB2	PC-TB2	PC-FR1
SEDIMENT	07/29/93	PC-FB1	PC-FD2	101-77 201-75	DC 501
SEDIMENT	07/29/93	PC-FB1	PC-FB2	PC-152	PC-ENT
SEDIMENT	07/29/93	PC-FB1	PC-FB2	rC-152	PC-EXI
SEDIMENT	07/29/93	PC-FB1	PC-FB2	FC-1 D2	DC ED 1
SEDIMENT	07/30/93	PC-FB1	PC-FB2	PC-153	10-57
SFDIMENT	07/30/93	PC-FB1	PC-FB2	PC-1B3	T-ERI
CEDIMENT	07/30/93	PC-FB1	PC-FB2	PC-TB3	PC-EKI
CEDIMENT	07/30/93	PC-FB1	PC-FB2	PC-TB3	PC-ERI
CEDIMENT	07/30/93	PC-FB1	PC-FB2	PC-TB3	PC-ER3
SEDIMENT	07/30/03	PC-FB1	PC-FB2	PC-TB3	PC-ER3
SEDIMENT	07/21/03	PC-FR1	PC-FB2	PC-TB4	PC-ER3
SEDIMENT	07/21/03	PC-FR1	PC-FB2	PC-TB4	PC-ER3
SEDIMENT	07/21/93	PC-FB1	PC-FB2	PC-TB4	PC-ER3
SEDIMEN	0110110	1	 		

nce higan Field Trip Equipment Blank Blank Rinsate	PC-FB2 PC-TB4 PC-ER3 PC-FB2 PC-TB4 PC-ER3 PC-FB3 PC-TB5 PC-ER4 PC-FB3 PC-TB5 PC-FR4 PC-FB2 PC-TB5 PC-FR4 PC-FB2 PC-TB5 PC-ER4 PC-FB2 PC-TB5 PC-ER4 PC-FB2 PC-TB5 PC-ER4 PC-FB2 PC-TB5 PC-ER4 PC-FB2 PC-ER4 PC-FB3 PC-ER1 PC-TB1 PC-ER1 PC-TB1 PC-ER1 PC-TB1 PC-ER1 PC-TB1 PC-ER1 PC-TB1 PC-ER1 PC-TB2 PC-ER1 PC-TB2 PC-FB1 PC-FB2 PC-FB3 PC-FB2 PC-FB1 PC-FB3 PC-FB2 PC-FB3 PC-FB3 PC-FB2 PC-FB3 PC-FB3 PC-FB2 PC-FB3 PC
Table J-13 Field QC Cross Reference MIANG, Alpena CRTC, Alpena, Michigan Date Field Field Blank Blank	07/31/93 PC-FB1 PP PC-FB1 PC-FB1 PP PC-FB1
Tab MIAN Matrix I	SEDIMENT SURFACEWAT GROUNDWATE GROUNDWATE GROUNDWATE GROUNDWATE GROUNDWATE
Sample ID	PC-TF4-SD009B PC-TF4-SD010A PC-TF4-SD010B PC-TF4-SD011 PC-TF4-SD011 PC-TF4-SD013 PC-TF4-SD014 PC-TF4-SD016 PC-TF4-SD016 PC-TF4-SD017 PC-TF4-SW001 PC-TF4-SW002 PC-TF4-SW003 PC-TF4-SW006 PC-TF4-SW006 PC-TF4-SW006 PC-TF4-SW007 PC-TF4-SW007 PC-TF4-SW006 PC-TF4-SW006 PC-TF5-MW1-GW4 PC-SF5-MW2-GW4 PC-SF5-MW3-GW4

Equipment Rinsate	PC-ER20 PC-ER5F PC-ER17 PC-ER17 PC-ER17 PC-ER17 PC-ER17 PC-ER11 PC-ER11 PC-ER11 PC-ER11 PC-ER11 PC-ER17 PC-ER17 PC-ER17 PC-ER17 PC-ER17 PC-ER17 PC-ER17 PC-ER17 PC-ER17 PC-ER17 PC-ER17 PC-ER17 PC-ER17 PC-ER17 PC-ER17 PC-ER17 PC-ER17 PC-ER17
Trip Blank	PC-TB25 PC-TB38 PC-TB38 PC-TB38 PC-TB30 PC-TB30 PC-TB20 PC-TB20 PC-TB22 PC-TB22 PC-TB22 PC-TB22 PC-TB22 PC-TB22 PC-TB22 PC-TB22 PC-TB14 PC-TB12 PC-TB12 PC-TB10 PC-TB10 PC-TB10 PC-TB10 PC-TB10 PC-TB10 PC-TB10
erence Michigan Field Blank	PC-FB6 PC-FB6 PC-FB6 PC-FB6 PC-FB6 PC-FB6 PC-FB6 PC-FB6
Table J-13 Field QC Cross Reference IANG, Alpena CRTC, Alpena, Michig Date Field Fiel Blank Bla	PC-FB7 PC-FB6 PC-FB6 PC-FB7
Table J-13 Field QC Cross Reference MIANG, Alpena CRTC, Alpena, Michigan Date Field Field Blank Blank	09/13/93 08/12/93 08/12/93 08/11/93 08/12/93 08/12/93 09/12/93 09/12/93 09/12/93 09/12/93 09/12/93 08/17/93 08/17/93 08/12/93 08/12/93 09/12/93 08/12/93 08/12/93 08/12/93 08/12/93 08/13/93 08/13/93 08/13/93 08/13/93 08/13/93 08/13/93 08/13/93
M Matrix	GROUNDWATE GROUNDWATE
Sample ID	PC-SF5-MW9-GW4 PC-LF6-MW1-GW4 PC-LF6-MW1-GW4 PC-LF6-MW3-GW4 PC-LF6-MW3-GW4 PC-LF6-MW4-GW4 PC-LF6-MW5-GW4 PC-LF6-MW6-GW4 PC-LF6-MW6-GW4 PC-LF6-MW6-GW4 PC-LF6-MW9-GW4 PC-LF6-MW9-GW4 PC-LF6-MW9-GW4 PC-LF6-MW9-GW4 PC-LF6-MW9-GW4 PC-LF6-SD1 PC-LF6-SD2 PC-LF6-SD3 PC-LF6-SD3 PC-HN8-MW1-GW4 PC-HN8-MW1-GW4 PC-HN8-MW3-GW4 PC-HN8-SB3-SS01-02 PC-HN8-SB3-SS01-02 PC-HN8-SB3-SS00-11

		Table J-13 Field QC Cross Reference	ld QC Cross Ref	erence		
Sample ID	Matrix	MIANG, Alpena CKIC, Alpena, Michigan Date Field Field Blank Blank	CKIC, Alpena, I Field Blank	Michigan Field Blank	Trip Blank	Equipment Rinsate
PC-HN8-SB6-SS00-02	SOIL	08/15/93	PC-FB3	PC-FB6	PC-TB12	PC-ER9
PC-HN8-SB6-SS12-13	SUBSOIL	08/15/93	PC-FB3	PC-FB6	PC-TB12	PC-ER9
PC-HN8-SB7-SS00-02	SOIL	08/15/93	PC-FB3	PC-FB6	PC-TB12	PC-ER9
PC-HN8-SB7-SS12-13	SUBSOIL	08/12/93	PC-FB3	PC-FB6	PC-TB12	PC-ER9
PC-HN8-SB8-SS01-02	SUBSOIL	08/17/93	PC-FB3	PC-FB6	PC-TB13	PC-ER10
PC-HN8-SB8-SS10-12	SUBSOIL	08/11/93	PC-FB3	PC-FB6	PC-TB13	PC-ER10
PC-RT9-MW1-GW4	GROUNDWATE	08/27/93	PC-FB5		PC-TB19	PC-ER17
PC-RT9-MW2-GW4	GROUNDWATE	08/27/93	PC-FB5		PC-TB19	PC-ER14
PC-RT9-MW3-GW4	GROUNDWATE	08/27/93	PC-FB5		PC-TB19	PC-ER14
PC-RT9-MW4-GW4	GROUNDWATE	09/08/93	PC-FB7		PC-TB22	PC-ER18
PC-RT9-MW5-GW4	GROUNDWATE	09/15/93	PC-FB7		PC-TB27	PC-ER20
PC-RT9-MW6-GW4	GROUNDWATE	09/15/93	PC-FB7		PC-TB27	PC-ER20
- PC-BG1-SB1-SS00-01	SOIL	08/09/93	PC-FB3	PC-FB6	PC-TB6	PC-ER7
PC-BG1-SB1-SS02-03	SUBSOIL	08/09/93	PC-FB3	PC-FB6	PC-TB6	PC-ER7
PC-BG1-SB1-SS09-10	SUBSOIL	08/09/93	PC-FB3	PC-FB6	PC-TB6	PC-ER7
PC-BG1-SB2-SS00-01	SOIL	08/15/93	PC-FB3	PC-FB6	PC-TB12	PC-ER9
PC-BG1-SB2-SS02-03	SUBSOIL	08/15/93	PC-FB3	PC-FB6	PC-TB12	PC-ER9
PC-PW-PW1-GW4	GROUNDWATE	08/10/93	PC-FB1F		PC-TB7	PC-ERSF
PC-PW-PW2-GW4	GROUNDWATE	08/10/93	PC-FB1F		PC-TB7	PC-ERSF
PC-PW-PW3-GW4	GROUNDWATE	08/10/93	PC-FB1F		PC-TB7	PC-ERSF

ahoratory	Lacotatory	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPLICHEM	COMPLICHEM	COMPOSITEM	COMPOCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPLICHEM	COMPLICIEN	COMPOCHEM	COMPUCHEM	COMPOCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	
·	Date	07/28/93	07/28/93	07/28/93	07/27/93	07/70/03	0712775	07/31/93	08/01/93	08/09/93	08/09/93	08/09/93	66/60/80	08/09/93	08/10/93	08/10/93	00/11/03	08/11/93	08/11/93	08/17/93	08/12/93	08/13/93	08/13/93	08/13/93	08/13/93	08/13/93	08/13/93	08/13/93	08/15/93	08/15/93	08/17/93	08/17/93	08/17/93	
÷;	Onits	l/gu	ng/l	ug/l	/on	1/97	ug/1	ng/l	ng/l	/gn	Ng/I	ng/l	√gn	ug/l	/ 61	1/80	ug/ı	ng/l	√gn	ng/I	/gn	/gn	/gn	√gn	/gn	/gn	√gn	√gn	l/gu	ng/l	ue/I	/øn	/on	uK/1
	(nai																		,	<b>-</b> ,										1	<b>,</b> ,	•	-	•
d in Trip Bla pena, Michiga	KUL	0.00	0.00	000	000	00.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	000	00.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	00.0	0.00	0.00	0.00	0.00	0.00	000	000	00.0	00.0	0.00
lytes Detecte a CRTC, Alı	Kesult	0.18	٥ *	0.10	20.0	0.20	0.09	0.35	0.39	0.58	90'0	90.0	90.0	90.0	3.5	0.41	0.44	0.05	0.05	0.15	80.0	0.20	80.0	90.0	80.0	0.05	0.05	80.0	0.09	0.12	21.0	0.10	00.0	0.09
Table J - 14 Analytes Detected in Trip Blanks MIANG, Alpena CRTC, Alpena, Michigan	Analyte	1 3-Dimethylbenzene	1 4 Dimethylbenzene			Methylene chioride	Ethylbenzene	Methylene chloride	Methylene chloride	Methylene chloride	1.3-Dimethylbenzene	1 4-Dichlorohenzene	1.4.Dimethylbenzene	December 1	Denzene	Methylene chloride	1,4-Dichlorobenzene	1,3-Dimethylbenzene	1,4-Dimethylbenzene	Chloroform	1,3-Dichlorobenzene	1,3-cis-Dichloropropylene	Chloroform	Tetrachloroethylene	1,3-Dichlorobenzene	1.3-Dimethylbenzene	1 4-Dimethylbenzene	Ethvlbenzene	Methylene chloride	Tollione	Culture	Chiorolorin	Benzene	Chlorobenzene
	Lab No	658335	76666	20002	266632	266977	567263	567575	567712	\$69290	\$69290	\$60.00	660200	26950	067690	569861	569861	570212	570212	570416	570416	570777	570777	570777	570777	57077	57077	57077	771767	271767	707176	3/1/11	571711	571711
	Sampleid	100T 20		PC-1B01	PC-TB01	PC-TB02	PC-TB03	PC-TB04	PC-TB05	PC_TB06	DC TBOK	10-1 box	PC-1 500	PC-1 B06	PC-TB06	PC-TB07	PC-TB07	- PC-TB08	PC-TB08	PC-TB09	PC-TB09	PC-TR10	DC_TR10	PC-TR10	PC-TB10	DC TRIO	0101-010	FC-1510	rc-ibio	PC-1512	PC-TB12	PC-TB13	PC-TB13	PC-TB13

Laboratory	СОМРИСНЕМ	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM
Date	08/17/93	08/17/93	08/23/93	08/23/93	08/23/93	08/23/93	08/23/93	08/24/93	08/29/93	09/08/93	09/08/93	09/08/93	66/60/60	66/60/60	66/60/60	66/60/60	09/10/93	09/10/93	09/13/93	09/13/93	09/14/93	09/15/93	09/15/93
Units	/Jan	l/gn	/gn	/gn	l/gn	l/gn	/gn	/gn	l/gn	/gn	l/gn	√gn	/gn	/gn	ng/l	l/gn	l/gu	l/gn	l/gn	l/gn	l/gn	/gn	l/gn
nks m Qual	-	-			-		•		Ţ														
d in Trip Bla ena, Michiga RDL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lytes Detected a CRTC, Alp Result	0.15	0.22	0.35	0.48	0.10	0.07	80.0	0.34	0.27	0.05	0.05	0.19	09.0	90.0	90.0	0.14	90.0	90.0	90.0	90.0	0.21	0.10	0.16
Table J - 14 Analytes Detected in Trip Blanks MIANG, Alpena CRTC, Alpena, Michigan Analyte Result RDL	1.1.1-Trichloroethane	Chloroform	Methylene chloride	Methylene chloride	1,2-Dimethylbenzene	Ethylbenzene	Styrene	Methylene chloride	Methylene chloride	1,3-Dimethylbenzene	1,4-Dimethylbenzene	Toluene	Methylene chloride	1,3-Dimethylbenzene	1,4-Dimethylbenzene	Toluene	1,3-Dimethylbenzene	1,4-Dimethylbenzene	1,3-Dimethylbenzene	1,4-Dimethylbenzene	Benzene	Ethylbenzene	Toluene
Lab No	571950	571950	572976	572975	572976	572976	572976	573652	575033	576297	576297	576297	576533	576533	576533	576533	876709	576709	576951	576951	577551	577703	577703
Sampleid	PC-TB14	PC-TB14	PC-TB15	PC-TB15	PC-TB15	PC-TB15	PC-TB15	PC-TB16	PC-TB20	PC-TB22	PC-TB22	PC-TB22	PC-TB23	PC-TB23	PC-TB23	- PC-TB23	PC-TB24	PC-TB24	PC-TB25	PC-TB25	PC-TB26	PC-TB27	PC-TB27

#### J.2.2 Field Blanks

Seven FB were collected to provide baseline analytical data for the water used for equipment decontamination. Field blanks were taken for the ASTM Type II water produced onsite using a Barnstead® E-Pure system, and the potable water used in the steam cleaner and as decontamination water. Field blanks were collected by randomly selecting sample containers from the supply, filling them with water from the sample source, and then preserving as appropriate for the required analysis. The blanks were analyzed in the same manner as the associated environmental samples. Low levels of chloroform, bromenated compounds, methylene chloride, lead, arsenic, copper, nickel, and zinc were detected in selected field blanks prepared during the RI. Table J-15 summarizes the concentrations of elements detected in the field blanks collected at Alpena CRTC. The Alpena CRTC RI was conducted in four sampling events separate field blanks were obtained for each sampling event. The low levels of compounds and elements detected in the field blanks are not considered to have contributed to any levels seen in the associated environmental samples.

## J.2.3 Equipment Rinseate

Twenty equipment blanks were prepared from rinseates of equipment used to obtain environmental samples. The equipment blanks were prepared by pouring ASTM Type II water produced on site, through or over sampling equipment which had been decontaminated. The equipment blanks were preserved as appropriate for the required analysis and analyzed using the same methods as the associated environmental samples. VOCs such as methylene chloride, chloroform, ethyl benzene, and toluene were detected at concentrations below the CRDL in the equipment rinseates. SVOCs such as bis(2-ethylhexyl)phthalate, diethyl phthalate and phenol were detected in equipment rinseates at concentrations below the CRQL. Table J-16 summarizes the concentrations of elements detected in the equipment blanks collected at Alpena CRTC.

### J.2.4 Field Replicates

One replicate environmental sample was collected for every 10 environmental samples, as required by DOE/HWP-65. Sample collection reproducibility and media variability were measured in the laboratory by the analysis of field replicates. Field RPD values were calculated only for compounds and elements detected above the CRDLs in one replicate pair samples and only for those compounds and elements not considered to be common laboratory contaminants (e.g., methylene chloride). The RPD value of the detected compound or parameter was reviewed to assess the sample collection reproducibility and matrix variability. A total of 72 soil samples, 75 water samples, 37 sediment, 9 soil replicate samples, 5 replicate sediment, and 7 duplicate water samples were collected.

Field RPD values were calculated only for compounds and elements detected above the CRDLs in one of the replicate pair samples and only for those compounds and elements not considered to be common laboratory contaminants (e.g., methylene chloride). Increased percent differences were expected for all analytes detected in soil samples, since all samples remained in stainless

,	Laboratory	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM
	Date	07/28/93	07/28/93	07/28/93	11/12/92	07/29/93	07/29/93	07/29/93	07/29/93	07/29/93	07/29/93	07/29/93	07/29/93	07/29/93	11/12/92	11/12/92	08/10/93	08/10/93	08/10/93	08/10/93	08/10/93	08/10/93	08/10/93	08/10/93	08/23/93	08/23/93	08/23/93	08/23/93	08/23/93	08/23/93	08/23/93
	Units	l/gn	l/gn	/gn	/gn	l∕gu	//gn	ng∕l	√gn	l/gu	/gn	/gn	/gn	/gn	/gn	/gn	l/gn	√gn	√gn	l/gu	/gn	ng/l	ng/l	mg/l	l∕gu	l∕gn	√gn	/gn	ng/l	l/gn	√gn
Blanks iigan	Qual														0							-			ŗ	ſ	ſ	-	ſ		0
cted in Field Alpena, Mich	RDL	0.00	0.00	00.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	00.0	0.00	00.0	0.00	00.0	00.0	0.00	0.00	00.0	00.0	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
alytes Dete na CRTC,	Result	11.00	1.00	17.00	3.10	2.90	2.50	0.92	4.10	120.00	8.40	859.00	0.50	3.00	4.30	5.50	1.50	2.00	0.36	3.30	0.29	12.10	13.30	ons 1.60	2.10	4.20	0.46	11.00	0.30	0.10	5.30
Table J - 15 Analytes Detected in Field Blanks MIANG, Alpena CRTC, Alpena, Michigan	Analyte	2-Propanone	Di-n-hutvl phthalate	bis(2-Ethylhexyl)phthalate	Lead	Bromodichloromethane	Bromoform	Chloroform	Dibromochloromethane	Copper	Lead		Di-n-butyl phthalate	bis(2-Ethylhexyl)phthalate	Arsenic	Lead	Bromodichloromethane	Bromoform	Chloroform	Dibromochloromethane	Methylene chloride	Arsenic	Zinc	Total Petroleum Hydrocarbons 1.60	Bromodichloromethane	Bromoform	Chloroform	Dibromochloromethane	Methylene chloride	Ethylbenzene	Zinc
	Lab No	566786	\$6786	566786	525534-FB1	566978	\$66978	\$66978	846978	886998	886998	886998	566979	866979	525534-FB2	525534-FB2	569858	569858	\$69858	569858	569858	569864	569864	269880	572980	572980	572980	572980	572980	572980	572985
																															• .
	Sampleid	PC-FB01	PC_FR01	PC-FR01	PC-FR01	PC-FB02	PC-FB02	PC-FB02	PC-FB02	PC-FB02	PC-FB02	PC-FB02	PC-FB02	PC-FR02	PC-FB02	2 PC-FB02	PC-FB03	PC-FB03	PC-FB03	PC-FB03	PC-FB03	PC-FB03	PC-FB03	PC-FB03	PC-FB04	PC-FB04	PC-FB04	PC-FB04	PC-FB04	PC-FB04	PC-FB04

	Laboratory	COMPUCHEM COMPUCHEM COMPUCHEM COMPUCHEM COMPUCHEM COMPUCHEM COMPUCHEM COMPUCHEM
	Date	08/23/93 08/23/93 08/23/93 08/11/93 08/11/93 09/07/93
	Units	mg/l ug/l ug/l ug/l mg/l ug/l ug/l ug/l ug/l mg/l mg/l mg/l
1 Blanks	onigan Qual	<b></b>
ted in Field	lpena, Mic RDL	0.25 0.00 0.00 0.25 0.00 0.00 0.00
Table J - 15 Analytes Detected in Field Blanks	MIANG, Alpena CRTC, Alpena, Michigan Analyte RDL (Capella Result RDL)	Total Petroleum Hydrocarbons 1.10 Methylene chloride 0.47 Zinc 43.60 Total Petroleum Hydrocarbons 0.70 Chloroform 0.09 1,2-Dichlorobenzene 0.40 Zinc 5.30 Toluene 6.12 Toluene
	Lab No	572981 572986 572987 572987 570192 570192 576295
	Samuleid	PC-FB04 PC-FB05 PC-FB05 PC-FB06 PC-FB06 PC-FB06 PC-FB06

	Laboratory	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM
	Date	07/29/93	07/29/93	07/31/93	07/31/93	07/31/93	07/31/93	07/31/93	08/01/93	08/01/93	08/12/93	08/12/93	08/12/93	08/12/93	08/15/93	08/15/93	08/15/93	08/15/93	08/15/93	08/15/93	08/15/93	08/15/93	08/15/93	08/15/93	08/15/93	08/15/93	08/15/93	08/15/93	08/15/93	08/15/93	08/15/93
	Units	l/gu	/gn	l/gn	√gn	//gn	//gn	√gn	l/gn	l/gu	l/gn	l/gn	l/gu	mg/l	l/gu	/gn	/gn	l/gm	l/gu	ng/l	ng/l	√gn	l/gn	l∕gu	l∕gu	mg/l	√gn	Vgn	√gn	l/gn	ng/l
kinsates m	Qual	0	ſ													•	,			ר				<b>-</b> 3	ſ		٠			ſ	-
Equipment Fena, Michiga	RDL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.25	0.00	0.00	00.0	00.0	00.0	00.0	00.0	0.25	0.00	00.0	00.0	00.0	0.00
Detected in CRTC, Alp	Result	4.30	15.00	0.16	08.0	2.00	4.00	20.00	0.78	06.0	0.21	60.0	21.00	ns2.00	51.90	4.00	06.0	ns0.40	0.03	0.28	8.50	06.0	1.00	06.0	09.0	ons 2.00	0.04	0.04	226.00	7.00	1.00
Table J - 16 Analytes Detected in Equipment Rinsates MIANG, Alpena CRTC, Alpena, Michigan	Analyte	Zinc	bis(2-Ethylhexyl)phthalate	Methylene chloride	Di-n-butyl phthalate	Diethyl phthalate	Phenol	bis(2-Ethylhexyl)phthalate	Methylene chloride	Phenol	Chloroform	Methylene chloride	bis(2-Ethylhexyl)phthalate	Total Petroleum Hydrocarbons 2.00	Zinc	Diethyl phthalate	Dimethyl phthalate	Total Petroleum Hydrocarbons 0.40	Methylene chloride	Toluene	Lead, Dissolved	Benzo(a)anthracene	Chrysene	Diethyl phthalate	Pentachlorophenol	Total Petroleum Hydrocarbons 2.00	1,3-Dimethylbenzene	1,4-Dimethylbenzene	Zinc	Diethyl phthalate	Dimethyl phthalate
	Lab No	567292	567259	567576	567577	567577	567577	567577	80229	267709	570413	570413	570421	570451	571295	571274	571274	571296	571258	571258	571310	571269	\$71269	571269	571269	571283	571261	571261	571288	571272	571272
	Sampleid	PC-ER01	PC-ER01	PC-ER03	PC-ER03	PC-ER03	PC-ER03	PC-ER03	PC-ER04	PC-ER04	PC-ER05	PC-ER05	PC-ER05	. PC-ER05	PC-ER07	F PC-ER07	PC-ER07	PC-ER07	PC-ER08	PC-ER08	PC-ER08	PC-ER08	PC-ER08	PC-ER08	PC-ER08	PC-ER08	PC-ER09	PC-ER09	PC-ER09	PC-ER09	PC-ER09

Laboratory	COMPLICHEM	COMPLICHEM		COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPLICHEM	COMPLICHEM	COMITCHEM	COMPOCHEM	COMPOCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPLICHEM	COMPLICITEM	COMPUCHEM	COMPUCHEM	COMPOCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPUCHEM	COMPLICHEM	COMPLICHEM		COMPOCHEM
Date	00/15/03	06/13/53	08/1//93	08/17/93	08/17/93	08/17/93	06/17/03	06/1//7	08/1//93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/93	08/17/03	00/11/93	08/17/93	08/17/93	08/17/93	08/24/93	08/24/93	08/24/93	08/24/93	08/26/93	08/26/93	08/26/93	08/26/93	08/26/93	08/76/03	06/15/103	66/97/90	08/70/90	26/92/80
Units	V	ng/l	ng/I	ng/l	ng/l	Von.	100	ng/I	ng/1	ng/l	ng/I	/gn	/gn	ug/l	/on	n R/A	mg/ı	l/gn	√gn	mg/l	/gn	/gn	√gn	mg/l	/gn	//gn	/gn	/gn	ng/l	70"	1/8n	ng/1	ng/I	/ou
linsates n Qual		•	-								-														5									
Equipment R sena, Michiga RDL	6	0.25	0.00	00.0	000	00.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	000	00.0	0.00	0.25	0.00	0.00	0.25	0.00	0.00	0.00	0.25	0.00	0.00	00.0	0.00	000	00.0	0.00	0.00	00.0	000
Detected in a CRTC, Alp Result	6	ns2.00	0.0	4.60	1 00	1.00	1.00	0.10	2.00	7.00	0.21	0.09	73 30	00 -	00.4	4.00	ons2.50	4.30	2.00	ons0.30	0.21	0.11	6.50	ons1.10	16.80	35.00	0.07	0.12	0.10	2.0	0.09	80.0	0.22	,
Table J - 16 Analytes Detected in Equipment Rinsates MIANG, Alpena CRTC, Alpena, Michigan Analyte Result Rosult		Total Petroleum Hydrocarbons 2.00	Chlorobenzene	Zinc	D: Lutul abehalate	Di-n-butyl putnalate	Diethyl phthalate	Phenanthrene	Phenol	bis(2-Ethylhexyl)phthalate	Chloroform	Ethylhenzene	Zino	Di.	French to the training		Total Petroleum Hydrocarbons 2.50	Zinc	bis(2-Ethylhexyl)phthalate	Total Petroleum Hydrocarbons 0.30		Ethvihenzene	Zinc	Total Petroleum Hydrocarbons 1.10		bis(2-Ethylhexyl)phthalate	Benzene	Chloroform	Medical attenda	Methyl chloride	Tetrachloroethylene	Trichloroethylene	Toluene	
oN de l		571292	571672	571674		2/16/3	571673	571673	571673	571673	571952	571052	20110	106116	5/1955	571955	571962	571956	571953	571958	573664	\$73664	573667	573666	574399	574418	574349	776763	374300	574366	574366	574366	574366	
ri de	Sampiero	PC-ER09	DC EP 10	rc-Enio	PC-ERIO	PC-ER10	PC-ER10	PC-ER10	PC-FR10	PC_FR 10	DC EP11	rothii	PC-EKII	PC-EK11	PC-ER11	PC-ER11	PC-ER11	PC-EKIT	PC-FR12	DC_ER 12	ro-Eniz	rC-ERIS	rc-ekis	PC-EKI3	PC-ENIS	PC EN14	rc-Enit	PC-EKI3	PC-ER16	PC-ER16	PC-ER16	PC-ER16	PC-FR16	

		Table J - 16 Analytes Detected in Equipment Kinsates	Detected in	Equipment R	ınsates			
		MIANG, Alpena CRTC, Alpena, Michigan	CRTC, Alp	ena, Michigar	_			
Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
ָרָ מָּרָ מְּרָ מָּרָ מָּרְ מָּרְ מְּרָ מְּרָ מְּ	574473	Dhenol	1 00	000		ng/l	08/26/93	COMPUCHEM
PC-EK10	C7++/C	LICION				, ,	20/7//00	COMPLICHEM
PC-ER16	574426	Total Petroleum Hydrocarbon	180.50	0.25		mg/1	56/07/90	COMPOCINEM
PC-FR17	574973	Toluene	0.21	0.00		ng/l	08/29/93	COMPUCHEM
DC ED 17	574983	Zinc Dissolved	5.30	0.00	5	/gn	08/29/93	COMPUCHEM
PC-ENI/	\$70775	Total Petroleum Hydrocarbor	ns0.70	0.25		mg/l	08/29/93	COMPUCHEM
ro-eni/	C1C+1C	1 3. Dimethylhenzene	0 04	000		ug/l	09/13/93	COMPUCHEM
PC-EKI9	2060/6	1 A Dimethylogueone	0.04	000		/on	09/13/93	COMPUCHEM
PC-ER19	7969/5	1,4-Dimemyloenzene	<b>+</b> 60.0	00.0	5	/e	09/13/93	COMPLICHEM
PC-ER19	\$77022	Zinc	8.30	0.00	3	ng/1	2012100	Marianda
PC-ER19	576971	Di-n-butyl phthalate	0.80	0.00		ng/I	09/13/93	COMPOCEEM
PC-FR19	576971	Phenol	0.70	0.00		l/gn	09/13/93	COMPUCHEM
DC ED 20	577481	1 3-Dimethylbenzene	90.0	0.00		l/gn	09/14/93	COMPUCHEM
rc-Enzo	577481	1 4-Dimethylbenzene	90.0	0.00		//gn	09/14/93	COMPUCHEM
rC-ERZU	277484	Zinc	8 90	0.00	5	ng/l	09/14/93	COMPUCHEM
PC-ENZO	577A87	Diethyl nhthalate 0.90	06.0	0.00	,	/gn	09/14/93	COMPUCHEM
FC-EK20	204/16	Dhenol	2.00	000		ng/l	09/14/93	COMPUCHEM
FC-EK20	704//6		0 Y Y		6	/on	09/15/93	COMPUCHEM
PC-ER21	278088	Zinc	3.40	0.00	3	1/91	00/15/03	COMPLICHEM
PC-ER21	578094	Zinc, Dissolved	4.00	0.00		ng/1	09/13/93	COMFOCILEM
PC-FR21	578091	Total Petroleum Hydrocarbons 0.80	ns0.80	0.25		mg/l	09/15/93	COMPOCHEM

sleeves (i.e., not mixed) after the sampling equipment was retrieved from the borehole. The field replicate for each soil analyses was obtained from the adjacent sleeve and water samples were split into different sample containers upon sampling.

No relative percent difference values were calculated for VOC water duplicate since no VOCs were detected in either of the replicate samples. Two relative percent difference values for soils were calculated for VOCs. Both values for 2-butanone and 1,4-dichlorobenzene exceeded control limits of 20%. SVOCs were not detected above the CRDL in the replicate soil and water samples collected for SVOCs. Therefore, RPD values were not calculated for SVOCs. Four replicate soil pairs were used to evaluate priority pollutant metals concentrations and to evaluate sample collection reproducibility and matrix variability at the Alpena CRTC. Eighteen of the 36 calculated soil RPD values were greater than 20 percent. The percent difference ranged between 21% and 100%. These results are considered to have little impact on the environmental data quality and considered more likely to be the result of the variability of the soil matrix. Table J-17 summarizes the concentrations of elements detected in the replicate environmental samples collected at the Alpena CRTC.

# J.3 LABORATORY QUALITY CONTROL ASSESSMENT

All environmental samples collected at Phelps Collins ANG Base were analyzed using the 3/90 EPA CLP SOW for GC/MS analyses and EPA solid waste test methods and general chemical methodology from the following references:

- Statement of Work For Organic Analysis, Multi-Media, Multi-Concentration, EPA Contract Laboratory Program, 3/90 (SVOCs)
- Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods, SW-846, Third Edition, September 1986, with 1989 revisions (VOCs, priority pollutant metals)
- Methods for Chemical Analyses of Water and Wastes, EPA 600/4-79-020, EPA 1983, with revisions (TPH)
- Requirements for Quality Control of Analytical Data, HAZWRAP, DOE/HWP-65/R1 6/90 (VOCs, SVOCs, priority pollutant metals, and TPH)

HAZWRAP Level C documentation was required and submitted by the laboratory for all analyses. All data were validated and qualified using the guidelines and specifications described in the following documents:

Table J-17: Compounds and Elements Detected in Field Duplicates MIANG, Alpena CRTC, Alpena, Michigan

15-07 14-05	QUAL	æ	200	בכ	D	:	<b>)</b>	<b>&gt;</b> >	Þ	<b>&gt;</b> =	Þ	o:	<b>-</b>	<b>&gt;</b>	D	ב		ę	ŝ		_		ם	
SB3 PC-MP2-SB3-SS05-07 PC-MP2-SB3-SS04-05 08/17/93	RESULT Q	1.40	1.40	<del>4.</del> 8.	1.90 0.17	•	340	9. 8. 0. 0. 0.	340	340 340	£ 6	340	340	340	340	340	-	. 6	0.4		2.70	•	1.50	
94-05	QUAL	<b>m</b>	555	<b>5</b> 5	פפ	;	<b>&gt;</b> >	<b>&gt;</b> >	<b>&gt;</b>	<b>&gt;</b> =	<b>&gt; &gt;</b>	<b>:</b>	<b>&gt;</b> =	<b>=</b>	<b>&gt;</b>	ם		Ş	200				0	
SB3 PC-MP2-SB3-SS04-05 08/17/93	RESULT	1.40	1.20	9.5 9.6 9.6	1.90		340	340	340	340	340	340	946	340	340	340			9.9		3.30	•	1.80	
508-10	QUAL	æ		200	<b>5 8</b>	:	<b>&gt;</b> >	<b>&gt;</b> =	<b>&gt;</b>	<b>&gt;</b> =	<b>&gt;</b> >	Þ	<b>&gt;</b> :	<b>=</b>	Þ	Þ		:	<b>-</b>				0	
SB10 PC-MP2-SB10-SS08-10 PC-MP2-SB10-SS03-04 09/13/93	RESULT	4.10	1.40 0.14	1.40	1.90	;	340	340 340	340	340	340	340	340	340	340	340			0.41	•	2.80		1.90	
	QUAL	m	ם מ	<b>&gt;</b> > >	<b>D m</b>	;	<b>&gt;</b>	<b>D</b> =	<b>&gt;</b>	<b>&gt;</b> =	) <b>;</b>	<b>&gt;</b>	<b>&gt;</b> :	<b>&gt;</b> =	Þ	D		į	3		-	•	0	
SB10 PC-MP2-SB10-SS03-04 09/13/93	RESULT	5.20	0.12	1.40	1.80	;	340	340	3.0	340	£ 5	340	340	340	340	340		•	0.75	•	2.50		1.80	
	QUAL	-	D M :	) p =	) <b>A</b>		<b>&gt;</b> >	<b>&gt;</b> =	<b>&gt;</b>	þ:	<b>&gt;</b> =	Þ	<b>&gt;</b> :	<b>&gt;</b> =	ככ	Þ			0 <b>B</b>		-	1	ם	
SB4 PC-P1-SB20-SS00-02 PC-P1-SB4-SS00-01 08/24/93	RESULT Q	5.30	0.16	1.60	2.10		380 380	380	380	380	380	380	380	380	380	380		•	0.73	•	4 40	·	1.80	
-01	QUAL	æ	ם מ	) D =	000		<b>D</b> D	ם ב	<b>&gt; &gt;</b>	<b>&gt;</b> :	<b>&gt; =</b>	<b>&gt;</b>	<b>:</b>	<b>&gt;</b> :	<b>&gt;</b> >	Þ			Þ				Ω	
SB4 PC-P1-SB4-SS00-01 08/24/93	RESULT Q	1.80	1.50	1.50	2 5.80		360 360	360	360	360	360	360	360	360	360 360	360		•	0.43	•	٠.	77.	1.60	
LOCATOR: SAMPLE ID: DUPLICATE OF: COLLECTION DATE:	UNITS:	By/Sn	ay'an ag'kg	ug/kg ug/kg /h	ug/kg ug/kg ug/kg	)	ug/kg ug/kg	ug/kg	ug/kg ug/kg	ug/kg	ug/kg 	Sy/Sn Sy/Sn	ug/kg	ug/kg	ug/kg us/ke			mg/kg	mg/kg	mg/kg	mg/kg		mg/kg	
I		8010 Methylene chloride	8020 1,2-Dichlorobenzene 1,2-Dimethylbenzene	1,4-Dichlorobenzene Bertzene	Chiotobenzene Ethylbenzene Toluene	CLP 3/90	Anthracene Benzo/alanthracene	Benzo(a)pyrene	Benzo(b)fluoranthene Benzo(ghi)perylene	Benzo(k)fluoranthene	Carbazole	Fluoranthene	Fluorene	Indeno(1,2,3~c,d)pyrene	Phenanthrene Pyrene	bis(2-Ethylhexyl)phthalate	METALS	Aluminum	Arsenic	Barium	Calonum	Caromann	Copper	

Table J-17: Compounds and Elements Detected in Field Duplicates MIANG, Alpena CRTC, Alpena, Michigan

504 405	QUAL	×	ПГ	n	æ		
SB3 PC-MP2-SB3-SS05-07 PC-MP2-SB3-SS04-05 08/17/93		0.82	3.60	0.31	2.90	. 21	
C-MP2-SC-	RESULT						
	QUAL	-	1	Þ	æ		
SB3 PC-MP2-SB3-SS04-05 08/17/93	RESULT	1.40	5.30	0.31	5.50	42.60	
	QUAL	٦	D	n			
SB10 PC-MP2-SB10-SS08-10 PC-MP2-SB10-SS03-04 09/13/93	RESULT	2.90	3.60	0.31	12.70	29	
	QUAL	1	n	Ω			•
SB10 PC-MP2-SB10-SS03-04 09/13/93	RESULT	1.10	3.60	0.31	15.30	40.60	
	QUAL	¥	5	d d	æ		
SB4 PC-P1-SB20-SS00-02 PC-P1-SB4-SS00-01 08/24/93	RESULT	1 60 1	4.20	0.35	4.30	10.40	
0-01	QUAL		F	) Þ	08		
SB4 PC-P1-SB4-SS00-01 08/74/93	RESULT Q	06:0		0.33	4	9.60	
LOCATOR: SAMPLE ID: DUPLICATE OF:	UNITS:	mg/kg mg/kg	mg/kg mg/kg	mg/kg mg/kg mg/kg	mg/kg mg/kg mg/kg	Hydrocarbons mg/kg	
		Iron Lead	Magnesium Manganese	Nickel Potassium Selenium	Sodium Vanadium Zinc	TPH Total Petroleum Hydrocarbons	

Table J-17: Compounds and Elements Detected in Field Duplicates MIANG, Alpena CRTC, Alpena, Michigan

0.02	QUAL	æ		<b>.</b>
SB20 PC-CG3-SB10-SS00-02 PC-CG3-SB11-SS00-02 08/26/93	result qu	9.30	4.30 1.30 1.50 1.90 1.90 5.60	76 290 1170 430 430 640 640 640 640 7 1.50 1.50
	QUAL	-	55755 <b>8</b>	
SB11 PC-CG3-SB11-SS00-02 08/26/93	RESULT Q	4.20	1.50 1.30 0.15 1.50 1.90 0.12	340 340 340 340 340 340 340 340 340 340
	QUAL	æ		
SB9 PC-MP2-SB9-SS04-06 PC-MP2-SB9-SS03-04 08/16/93	RESULT Q	7	2.50 1.20 1.90 1.90 1.90 1.90 5.50	340 340 340 340 340 340 340 340 - - - - 1.60
3-04	QUAL	æ	5555555	
SB9 PC-MP2-SB9-SS03-04 08/16/93	RESULT Q	5.70	1.50 1.30 1.50 1.50 1.90 1.90 5.50	340 340 340 340 340 340 340 340 340 340
	QUAL	n	<b>8</b> DD	20000000000000000000000000000000000000
SB6 PC-BG1-SB2-SS02-03 PC-MP2-SB6-SS00-02 08/15/93	RESULT Q	9.10	0.79 0.14 0.11 0.04 2.10 2.10 5.60	380 380 380 380 380 380 380 380 380 380
.SS00-02	QUAL			
SB6 PC-MP2-SB6-SS 08/15/93	RESULT C	11	1.50 1.30 0.26 1.50 2 2 2 0.28	360 360 360 360 360 360 360 360 360 360
LOCATOR: SAMPLE ID: P DUPLICATE OF: COLLECTION DATE:	UNITS:	ByBn	gy/gn gy/gn gy/gn gy/gn gy/gn gy/gn gy/gn	48/kg
I		8010 Methylene chloride	8020 1,2-Dichlorobenzene 1,2-Dinethylbenzene 1,4-Dichlorobenzene Benzene Chlorobenzene Edylbenzene Toluene	CLP 3/90 Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(b)fluoranthene Benzo(c)fluoranthene Carbazole Chrysene Fluoranthene Fluoranthene Fluoranthene Prome Indeno(1,2,3-c,d)pyrene Prananthrene Pyrene Byrene bis(2-Ethylhexy)jphthalate METALS Aluminum Arsenic Barium Calcium Calcium Copper

Table J-17: Compounds and Elements Detected in Field Duplicates MIANG, Alpena CRTC, Alpena, Michigan

SB20 PC-CG3-SB20-SS00-02 PC-CG3-SB11-SS00-02 08/26/93	RESULT QUAL	13.50	3.70	0.32 U	33.10 B	382	
00-02	QUAL		Þ	Į,	<b>m</b>		•
SB11 PC-CG3-SB11-SS00-02 08/26/93	RESULT Q	3.80	3.70	0.32	10	<b>£</b>	
	QUAL	<b>~</b>	Ω	Þ	Ø		
SB9 PC-MP2-SB9-SS04-06 PC-MP2-SB9-SS03-04 08/16/93	RESULT Q		3.70	0.32	4.60	49.40	
03-04	QUAL	æ	D	5	æ		
SB9 PC-MP2-SB9-SS03-04 08/16/93	RESULT	0.84	3.60	0.33	5.40	18.20	
	QUAL	æ	n	1	æ		
SB6 31-SB2-SS0 22-SB6-SS( 08/15/93		1.40	4.10	0.63	9.60	14.10	
SB6 PC-BG1-SB2-SS02-03 PC-MP2-SB6-SS00-02 08/15/93	RESULT						
20-03	QUAL	1	ם	UL	æ		·
LOCATOR: SB6 SAMPLE ID: PC-MP2-SB6-SS00-02 PLICATE OF: 08/15/93	RESULT	31	3.80	0.32	20.30	2120	
LOCATOR: SAMPLE ID: DUPLICATE OF: COLLECTION DATE:	UNITS:	mg/kg mg/kg mg/kg	mg/kg mg/kg	mg/kg mg/kg	mg/kg mg/kg mg/kg		
		Iron Lead Magnesium	Manganese Nickel	Potassium Selenium	Sodium Vanedium	TPH Total Petroleum Hydrocarbons	

Table J-17: Compounds and Elements Detected in Field Duplicates MIANG, Alpena CRTC, Alpena, Michigan

Table J-17: Compounds and Elements Detected in Field Duplicates MIANG, Alpena CRTC, Alpena, Michigan

SB2 PC-HN8-SB2-SS02-03 PC-HN8-SB2-SS01-02 08/13/93	RESULT QUAL	2520 1.20			0.31 U			11.30	
SB2 PC-HN8-SB2-SS01-02 08/13/93	RESULT QUAL	4490 1.80	637	2	0.31 UL 39 0.31	0	10.10 B	29.90	
LOCATOR: SB13 SAMPLE ID: PC-CG3-SB13-SS00-02 PC-CG3-SB13-SS00-02 PC-CG3-SB13-SS00-02 PC-CG3-SB13-SS00-02 TION DATE: 08/26/93	RESULT QUAL	5.50		3.70 U	0.31 UL		10.70 B	9.90	
SB13 C-CG3-SB13-SS00-02 08/26/93	RESULT QUAL	2.10	•	3.70 0	- 0.31 UL	1 1	7.10 B	6.30 U	
LOCATOR: SAMPLE ID: P DUPLICATE OF: COLLECTION DATE:	CINITS		Lead mg/kg Magnesium mg/kg		mg/kg mg/kg e-1		Vanadium mg/kg Zinc mg/kg	TPH Trast Petroleum Hydrocarbons mg/kg	

Table J-17: Compounds and Elements Detected in Field Duplicates MIANG, Alpena CRTC, Alpena, Michigan

L SAI DUPLK	LOCATOR: SAMPLE ID: DUPLICATE OF:	MW14 PC-PI-MW14-GW4	t 4-GW4	MW3 PC-FF7-MW3-GW4 PC-P1-MW14-GW4	3-GW4 4-GW4	MW9 PC-MP2-MW9-GW4 PC-MP2-MW5-GW4	79-GW4 75-GW4	MW5 PC-MP2-MW5-GW4	S-GW4	MW6 PC-MP2-MW6-GW4	6-GW4	MW1 PC-FF7-MW1-GW4 PC-MP2-MW6-GW4	71-GW4 76-GW4	
COLLECTION DATE:	ON DATE:	09/15/9	/93	09/15/93	ഇ	08/16/93	33	09/16/93		09/09/93	ξ.	09/09/93	33	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	,
8010	5600	,		,		•				,	,	•		
1,1,1,2-Tetrachloroethane	[/ẩn	0.35	Þ	0.35	ב ב	0.35			≃ :	0.35		0.35	<b>&gt;</b>	_
Bromodichloromethane	√an ∵	0.63		0.92	_,	0.40			~	0.40		0.40		_
Chloroethane	l/gu	0.50	D C	0.50	n	0.50	n n		~	0.50		0.50	<b>D</b>	_
Chloroform	l∕gu ∵	99.0	<b>-</b>	0.75	-	0.13	~		~	0.35		0.35		_
Dibromochloromethane	L/gu	2.	_	2.30	_	0.30	מ		<b>~</b>	0.30	<b>&gt;</b>	0.30		_
Methyl chloride	l/gn	0.50	n (	0.50	D (	0.50			~	0.50		0.50		_
Methylene chloride	Văn ∵	0.21		0.24	<b>8</b>	0.0	<b>1</b> 0		~	<b>4</b> .0	•	0.3		~
Tetrachloroethylene	L'an	0.30		0.30		0.3	<b>o</b>		~	0.30		0.00	6	
Trichloroethylene	l/gu	0.3(	n (	0.30	n (	0.30	n C		~	0.30	Ω (	0.12	7	
8020														
1,2-Dichlorobenzene	V8n ∵	0.15	<b>D</b>	0.15	D	0.15	2		<b>~</b>	3.40	<b>A</b>	0.15	. c	_
1,3-Dimethylbenzene	1/gu	0.15	•	0.0	•	i		•		90.0	٠,	•		
1,4-Dimethylbenzene	ug/I	0.19	_	0.00	_	•		٠		90:0	١.	•		
Benzene	, <b>[8</b> ]	0.11		0.10	_	0.35	2 0		~	0.3		0.35	S	_
Ethylbenzene	I/an	0.22	20	0.20	D	0.20			~	0.20	<b>D</b>	0.2		-
Toluene	yan.	0.20		0.2		0.26			~	0.1		0.25	n s	-
	)												,	
LCBNA														
Diethyl phthalate	Van.	09.0	8	<b>S</b>	n	"	•	•	n	•	ם	<b>~</b> ?	₽	_
Dimethyl phthalate	l/gu	*	_	Š	ם	09.0	• • • • • • • • • • • • • • • • • • •	· <b>~</b>	ם	*	Þ	· <b>v</b>		_
Phenol	1/an	7	8	ς.	D	S	ם	ς.	Þ	8.0	0	9.0	0	
bis(2-Ethylhexyl)phthalate	Vån	4	Ø	=	Ø	7	8	m	<b>~</b>	7	<b>6</b>	4		8
	)													
METALS														
Arsenic	Van ∵	4		4	Þ	◀		4	Þ	4	5	<b>▼</b>	_	_
Beryllium	l/8n	*		4	D	-		-	Þ		Þ		_	<b>5</b>
Chromium	l/an	01		2	Þ	•••		•	<b>&gt;</b>	<b>&gt;</b>	Þ	•	<b>&gt;</b>	_
Copper	∫/gn	15		15	Þ	4.50	0 OB	<b>च</b> (	D ;	▼ (	<b>&gt;</b>	₹ (	<b>&gt;</b> :	<b>5</b> 5
Lead	l/gu	7		7	Þ	7		74	5	7	Þ			5
Lead, Dissolved	/an	7	_	7	_	7		7		7		2.30	5 5	÷
Mercury	V8∕I	0.2		0.20		0.7		0.20		0.20				5
Nickel	l/gu	3\$		35	D	18	ם	18	<b>-</b>	<b>2</b>		28	Þ	5
Silver	/gn	4		4	Þ	4		4	Þ	5.40	0	4	Þ	<b>5</b>
Thallium, Dissolved	ng/I	m	_	က	_	3	ď			9		e	ď	د
Zinc	l/gu	7.5	0	11.70	0	245		254		9.7		4		5
Zinc, Dissolved	l/gn	4		9		10.40	0	5.10	<b>B</b> O	5.6		15.3		<u>ح</u>
ТРН														
Total Petroleum Hydrocarbons	//Bm	0.25	S	08.0	0	0.40	o	1.10	<b>B</b>	2.30	<b>8</b>	0.25		Þ

Table J-17: Compounds and Elements Detected in Field Duplicates MIANG, Alpena CRTC, Alpena, Michigan

	LOCATOR: SAMPLE ID:	MW5 PC-CG3-MW5-GW4	-GW4	MW9 PC-CG3-MW9-GW4 PC-CG3-MW5-GW4	9-GW4 75-GW4	MW1 PC-TF4-MW1-GW4	I v1-GW4	MW8 PC-TF4-MW8-GW4 PC-TF4-MW1-GW4	8-GW4 1-GW4	MW4 PC-HN8-MW4-GW4	4-GW4	MW9 PC-HN8-MW9-GW4 PC-HN8-MW4-GW4	V9-GW,	4 4
COL	COLLECTION DATE:	08/26/93		08/26/93	33	08/11/93	93	08/11/93	23	09/12/93	m	77/60	3	
•	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	님
8010			;	9			Δ		æ	0.35	Þ	0.35		D
1,1,1,2-Tetrachloroethane		0.35		0.19	=		( px		~	0.40		9.0		ם
Bromodichloromethane				0.40			( <u>c</u>		~	0.50		0.5		Þ
Chloroethane	ľgn			0.14	<b>.</b>		<u>م</u>		<b>~</b>	0.33		0.35		D:
Chloroform	I/an	0.35		0.13			ά Δ		~	0.30		0.3		<b>&gt;</b>
Dibromochloromethane	∫⁄3n		<b>-</b> :	5.0			4 22		<b>~</b>	0.50		0.50		Þ
Methyl chloride	l/gu			0.14			4 0		<b>~</b>	0.8		0.0		×
Methylene chloride	Van ∵∵			0.35	٠ •		4 0		ά α	0.3(		0.3		D
Tetrachloroethylene	/an	0.30		0.08	xo t		4 0		( <u>e</u>	0.30		0.30		ם
Trichloroethylene	Van			0.0	_		4		•					
CXC									1	•		ć	, 00 0	
8020 1.3 Nichlambenzene	(An	0.15	ם	0.15	S U		<b>~</b>		~	0.13	•	<b>i</b>	3	
1 2 Diezethylhenzene	√an			•			<b>~</b> :	•		•				
1.3-Dimethylbenzene	l/an			•			<b>≃</b> 1	•	•	36.0		Ċ	35	=
Designation of the second	Van	0.35		0.35			<b>≃</b>		<b>×</b> (	7.0		Ċ	0.00	=
Delizente	     		ם	0.20	n 0		<b>x</b>		<b>∡</b> (	0.20		<i>.</i>	3.0	, <b>c</b>
Toluene	l/gu			0.7			~		¥	7.0	5	5	2	1
		00000												
LCBNA		00000	1	•	:	٠		•	=	0.70		8	5	Þ
Diethyl phthalate	l/gu	<b></b>	<b>:</b>	n 4	<b>-</b> :	n v		•	<b>-</b>	*		80		Þ
Dimethyl phthalate	ľ/gu		<b>-</b> :	n č		, <b>c</b>		, <b>v</b> .	כ	8	D	8		ם
Phenol			<b>-</b>	Š	2	· •	1	4	i	7	æ	∞		m
bis(2-Ethylhexyl)phthalate	e ug/l		20	7		•		•						
		33883								•	:			=
MEIALS	Ľøπ.	≈ <del>±</del>	n	4	n	15.	15.60 L	23	<b>-</b>	₹ .	<b>&gt;</b> :	+ -		> =
Arseme	) = =		Ω	_	D			1.50		- (	<b>-</b> :	- 9		<b>=</b>
Berymum 2		· •	=	•	ם	19	01.	67.7	ຂ	×0 ·	<b>&gt;</b> ;	•		> =
Chromium	8 8		n	4	D	62	06:	91.7	2	*	<b>&gt;</b> :	ŧ c		<b>&gt;</b> =
Copper		. 2	n	7	2 U	56	09:	62.		7	<b>-</b>	4 (	٠,	) <u> </u>
Lead	, G		OL	7	Tn	7	ב	7.6	<b>9</b>		3:			3 =
Lead, Dissolved	91		D 0	0		0	8	0.20		07.0		9	3	<b>=</b>
Mercury	9 5			18	n	26		29.0		<b>≈</b> •	<b>-</b> :	9		<b>=</b>
Nickel	I/an	4	D	4	ם	4		4 (	<b>∩</b> :	đ (		* *		ב ב
Thalliam Dissolved	l/gu		•	æ	₽	en !	OF.	n (	10	15 30	ב מ	, vc		B
Zine	86	8.80	0 OB	.53	73.20 B	137		103	90			. =	1.80	80
Zinc, Dissolved	l/gu			21.	21.80 B	4	<b>.</b>	01.7		5				,
		2000												
TPH			1	•	5		1 40 B	c	0.80 B	0	0.25 U	0	0.60	æ
Total Petroleum Hydrocarbons	arbons mg/l	_ <	<b>2</b> 0	o d	O.4.0			5						

Table J-17: Compounds and Elements Detected in Field Duplicates MIANG, Alpena CRTC, Alpena, Michigan

<b>4</b>	د	Þ	· D	n	Ω	n	n	æ	n	b	=	<b>-</b>			=	۵ <b>د</b>	2		Ω	Ω	Ω	æ			1	•			11	)		ı n	n				<b>m</b>	ı	
MW2 PC-FF7-MW2-GW4 PC-HN8-MW5-GW4 09/14/93	RESULT QUAL	0.35										CI.0	•	9						S		7		13.40	7.40	2 2	07.76	0/.00 <b>28 2</b> 0	2.50	6,0	74.70			156	27.80		09:0	1	
	QUAL	n	) <b>)</b>	Ω	D	D	D	æ	n	n		2		=	>	g	٩		D	Ω	n	æ			=	>			=	· =	•	Þ	5		D		æ	ı	
MW5 PC-HN8-MW5-GW4 09/14/93	RESULT QU	0.35	0.40	0.50	0.35	0.30	0.50	0.21	0.30	0.30	3	4.TO	•	36.0	0.50	0.12	7.7		v	۸	S	က		12.30	13.30	74 30	05.04	93.00	٠,	5	61.30	4	3	137	4		0.40		
LOCATOR: SAMPLE ID: DUPLICATE OF: COLLECTION DATE:	UNITS:	yen.	l/an	l/an	J/an	l/gu	L'an	/an	, Tag	V∕gn	•	1/gu	j/ån		38 :	Ton San	- <b>X</b>		l/gu	I/ẩn	I/Zu	l/gu							Ton.		. (An	l/gu	1/8n	J/an	l/gu		bons me/l		
COPT		8010	Bromodichloromethane	Chloroethane	Chloroform	Dibromochloromethane	Methyl chloride	Methylene chloride	Tetrachloroethylene	Trichloroethylene	0708	1,2-Dreniorobenzene	1,3-Dimethylbenzene	I,4-Dimemyloenzene	Denzene Tra II	Emyloenzene Tolisasa		LCBNA	Diethyl phthalate	Dimethyl phthalate	Phenol	bis(2-Ethylhexyl)phthalate	METATO		Arsonic	Selymann Selymann	Carcament	Tand Tand	Lead Dissolved	Memilia	Nickel	Silver	Thallium, Dissolved	Zinc	Zinc, Dissolved	# <b>##</b>	Total Petroleum Hydrocarbons	•	

Table J-17: Compounds and Elements Detected in Field Duplicates MIANG, Alpena CRTC, Alpena, Michigan

æ æ	QUAL	<b>m m</b>	-5555	ממממ	, 66666	0	<b>8</b> 0 <b>8</b>	DD #	9
SD106B PC-TF4-SD106B PC-TF4-SD006B 07/30/93	result qu	3.90	120 450 450 650 640 640 640 640 640 640 640 640 640 64	94 4 4 6 99 9 9 9	64 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	1.30	1.90	2.70	593
<b>m</b>	QUAL	D M	55555		-	JG	<b>8</b> 0	D D	<b>2</b>
SD006B PC-TF4-SD006B 07/30/93	result qu	3.90	470 470 470 470	470 470 470	074 074 074 074 074	0.53	1.20	2.60	51.90
<b></b>	QUAL	D #	בממממ	2222		0	80	00	<b>m</b> Þ
SD104B PC-TF4-SD104B PC-TF4-SD004B 07/30/93	result qu	3.30	44 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	4 4 4 4 4 0 0 0 0 0 0	44 44 440 044 440 044 440	0.85	3.80 2.10 - 1.40	2.60	8.50 6.30
•	QUAL	n	55555		מממממ	0	98 B	u ur	<b>m</b> Þ
SD004B PC-TF4-SD004B 07/30/93	RESULT QU	3.60	430 430 430 430 430	430 430 430 430	430 430 430 430 430	1.10	3.50 2.10 - 1.60	2.40 0.40	9.10
	QUAL	æ	ממממ				'n	n	
SD004 PC-P1-SD004 PC-P1-SD002 09/13/93	RESULT Q	2.70	410 410 410 410 410	410 410 410 6410	410 410 410 410 410	3.10	3.70 6.30 - 2.30	4.30 0.37	19.60
	QUAL	D W	2222	5555	000000		1	n n	
SD002 PC-P1-SD002	RESULT Q	3.10	370 370 370 370	370 370 370	370 370 370 370 370	8.50	3.30 4.30 - 3.90	4 0.34	12.30
LOCATOR: SAMPLE ID: DUPLICATE OF:		ng/kg vg/kg	ug/kg ug/kg ug/kg ug/kg	ug/kg ug/kg ug/kg	ug/kg ug/kg ug/kg ug/kg ug/kg	mg/kg mg/kg mg/kg	mg/kg mg/kg mg/kg mg/kg	mg/kg mg/kg mg/kg mg/kg	mg/kg mg/kg mg/kg
I SA SUPLIC	COLLECTION DATE: UNITS:	8010 1,1,1-Trichloroethane Methylene chloride	CLP 3/90 2,2:-Oxybis(1-Chloropropane) 4-Methylphenol Anthracene Benzo(s)anthracene	Benzo(a)pyrene Benzo(b)fluoranthene Benzo(ghi)perylene Benzo(c)fluoranthene Buryl benzyl phthalate	Carbazole Chrysene Di-a-butyi phinalate Fluoranthene Indeno(1,2,3-c,d)pyrene Prenanthrene Prenanthrene	METALS Aluminum Arbenic Barium	Calcium Chromium Copper Iron Lead	Magnesium Manganese Nickel Sclenium Sodium	Vanadium Zinc TPH Total Petroleum Hydrocarbons

Table J-17: Compounds and Elements Detected in Field Duplicates MIANG, Alpena CRTC, Alpena, Michigan

<b>4</b> 0	QUAL	<b>m m</b>	ממ					æ	<b>1</b> ⊢	, P	<b>m</b>	
SD4 PC-LF6-SD4 PC-LF6-SD3 08/17/93	RESULT	0.72 1.50	\$00 \$00	460 450	320 690 61	069 88 88 9	430 64 650 120 460 420	' 6'	13.80	5.30 5.30 0.97	67.40	
	QUAL	E a	מכ	ם כו	<b>,</b> , ,	ם ם		<b>m</b>	٦ <del>-</del>	, 1 <sup>2</sup>	æ	
SD3 PC-LF6-SD3 08/17/93	RESULT Q	3.90	470 470	470	470 470 470	470 55 074	470 470 470 470 670	2.80	7.60	7.90	- 80.70 175	
83 83	QUAL	<b>m m</b>	ממ	: מכ	000	מממ		0	D #	2 20	00 <b>m</b>	
SD115 PC-TF4-SD115 PC-TF4-SD015 08/01/93	RESULT Q	0.37 6.90	430 430	430 430	84 4 85 0 80 0 80 0	430 430	430 430 430 430 430	1290 0.53 3.10	2.10 2.10 1760 0.80	681 24 4.60 0.40	49.50 3.50 5.80 10.30	
<b>S</b> ;	QUAL	n	ממ	ם מ	)	כככ		D.	80	a a a	æ	
SD015 PC-TF4-SD015 08/01/93	RESULT Q	3.60	44 044 0	440 6440	4 <del>4</del> 4 6 4 4	444 000	444444 64644	0.53	2.80 1.40	2.40	14.30	
LOCATOR: SAMPLE ID: SAMPLE ID: TION DATE:	UNITS:	ug/kg ug/kg	ng/kg ng/kg	ug/kg ug/kg	ug/kg ug/kg ug/kg	ug/kg ug/kg ug/kg	ug/kg ug/kg ug/kg ug/kg ug/kg	mg/kg mg/kg mg/kg	mg/kg mg/kg mg/kg mg/kg	mg/kg mg/kg mg/kg	mg/kg mg/kg mg/kg mg/kg	•
LOCATOR: SAMPLE ID: SAMPLE ID: COLLECTION DATE:		8010 1,1,1-Trichloroethane Methylene chloride	CLP 3/90 2,2'-Oxybis(1-Chloropropane) 4-Methylphenol	Anthracene Benzo(a)anthracene	Benzo(a)pyrene Benzo(b)fluoranthene Benzo(ghi)perylene	Benzo(k) fluoranthene Butyl benzyl phthalate Carbazole	Chrysene Di-n-butyl phthalate Fluoranthene Indeno(1,2,3-c,d)pyrene Prenanthrene Pyrene	METALS Aluminum Artenic Barium	Calcium Chromium Copper Ivan	Magnesium Manganese Nickel Selenium	Sodium Vanadium Zine TPH Total Petroleum Hydrocarbons	

Table J-17: Compouds and Elements Detected in Field Duplicates MIANG, Alpena CRTC, Alpena, Michigan

SW106 PC-TF4-SW106 PC-TF4-SW006 07/30/93 RESULT OUAL	0.28	-	0 5.30 0 U 4.40 0 3 0 0 6.70 0	
SW006 PC-TF4-SW006 07/30/93	88	0.16	6.30 C 4 t t 5.60 7.20 C	
LOCATOR: SAMPLE ID: DUPLICATE OF: COLLECTION DATE:	8010 Chloroform ug/l Trichloroethylene ug/l	8020 1,2-Dichlorobenzene ug/l	METALS Arenic Arenic, Dissolved Selenium, Dissolved Ug/l Selenium, Dissolved Ug/l Zinc, Dissolved Ug/l	

- Laboratory Data Validation Functional Guidelines for Evaluating Organic Analyses, EPA Contract Laboratory Program, June 1991, ( Region III modifications. June 1992) (SVOCs)
- Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses, EPA Contract Laboratory Program, February 1988 (priority pollutant metals)
- Requirements for Quality Control of Analytical Data, Hazardous Waste Remedial Actions Program (DOE/HWP-65/R1), July 1990 (VOCs by GC)

In addition to the above guidelines additional steps were taken to make the data validation process clearer to the reviewer. In the validation processes the "B" qualifier has been used to indicate potential contamination resulting from the laboratory process. An example of the modification of the guidelines is presented for VOCs. According to DOE/HWP-65/R1, July 1990 guidelines for VOC data validation analyzed by Gas Chromatograph, any compound detected in the sample and in the associated blank must be qualified when the result is less than five times the blank concentration. Sample results greater than the CRQL but less than five times the blank concentration should be qualified "U". If the sample result is greater than the CRQL and greater than five times the blank concentration no qualification is required. The use of the "U" qualifier in the first two cases could cause confusion as to the actual presence of the compound for results above the CRQL and possibly for those results below the CRQL. The "B" qualifier clearly indicates that the result may be suspect and may be a result of laboratory contamination. The use of the "B" qualifier is consistently applied to VOCs analyzed by GC methods, inorganic analysis, CLP SVOC, and TPH analysis. The proper application of the five-times and ten-times rule is used where applicable.

While it is a general practice in the validation of CLP organic methods to retain the laboratory added "J" qualifier for sample results below the CRQL, all laboratory added qualifiers are stripped from the data during the validation process. Since the CRQLs are known, or can be easily calculated for soil samples, the use of the "J" qualifier for results below the CRQL does not provide useful information to the reviewer. By removing this qualifier and only applying a "J" qualifier only in cases where specific QC requirements were not met reduces the potential for confusion. In general, in the CLP process where a "U" qualifier would be applied to indicate a result below the CRQL no qualifier has been added solely to indicate a result below the CRQL. Any qualifier added to the results below the CRQL indicates QC concerns.

All data validation qualifiers used were applied to the data as required by the forementioned guidelines. A complete summary of all data obtained and the qualifiers applied to that data is presented in Appendix K.

**APPENDIX K:** Laboratory Data Validation

Inorganic Data Validation

Phelps Collins Alpena, MI

Inorganic Data Validation CLP TAL

Sampling Dates: July 1993

#### **Samples in SDG # 936415:**

PFB1	POOGPW1	P00GPW2	P00GPW3
P02GMW1	P02GMW2	P04GMW2	P04W001
P04W002	P04W003	P04W004	P04W005
P04W006	P04W007	P04W008	P04W106
PBER1	PBER3	PBER4	PFB2
PFB3			

#### **Overview**

Twenty-one water samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

#### **Summary**

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

### Major Problems

None.

#### **Minor Problems**

#### **Holding Times**

All samples were analyzed within required holding times.

# Initial Calibration and Continuing Calibration

All initial and continuing calibration results fell within the control limits of 90-110%.

Antimony, cadmium, copper, and beryllium were detected in or more of the associated method blanks. No target elements were detected in any of the associated field blanks or equipment rinseates. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

## ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

### Laboratory Control Sample (LCS)

All LCS values were within +/- 20%.

### **Duplicates**

All duplicates were within appropriate control limits.

### Matrix Spike

Sample P04W006F was used for matrix spike/matrix spike duplicate. The MS/MSD was within control limits.

### Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL". Spike element detects in samples with spike recovery greater then 115% were qualified "K". Spike element non-detects in samples with high spike recovery were not qualified.

#### **ICP Serial Dilution**

Five fold dilution of P04W006F was performed in accordance with CLP requirements. Zinc had greater than a 10% difference. No qualifiers added since there were no positive results greater than 50 times the IDL.

Inorganic Data Validation CLP TAL

Sampling Dates: July 1993

## Samples in SDG # 936417:

P04W001F

P04W002F P04W006F PO4W003F PB-ER2 P04W004F P04W005F

P04W007F P04W106F

P04W008F

## **Overview**

Ten water samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

### **Summary**

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

## Major Problems

None.

## Minor Problems

## **Holding Times**

All samples were analyzed within required holding times.

# Initial Calibration and Continuing Calibration

All initial and continuing calibration results fell within the control limits of 90-110%.

### <u>Blanks</u>

No target elements were detected in the method blanks.

## ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

## Laboratory Control Sample (LCS)

All LCS recovery values were within +/- 20%.

## **Duplicates**

All duplicates were within appropriate control limits.

## Matrix Spike

Sample P04W006F was used for matrix spike/matrix spike duplicate. The MS/MSD was within control limits.

## Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL".

## **ICP Serial Dilution**

Five fold dilution of P04W006F was performed in accordance with CLP requirements. Zinc had greater than a 10% difference. Qualifiers were not add since there were no positive results greater than 50 times the IDL.

Phelps Collins Alpena, MI Inorganic Data Validation CLP TAL Sampling Dates: August 1993

## **Samples in SDG # 936421:**

P00GPW1F	P00GPW2F	P02GMW1F	P00GPW3F
P5MW3GW4F	P2MW3GW4F	PBER08F	P3MW1GW4F
P2MW9GW4F	P5MW1GW4F	P2MW2GW4F	P2MW4GW4F
P8MW1GW4F	P4MW8GW4F	P4MW1GW4F	P02GMW5F
P8MW1GW4F	P41010000004F	1-41111111011111	, , , , , , , , , , , , , , , , , , , ,

#### **Overview**

Sixteen water samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

#### **Summary**

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

#### **Major Problems**

None.

## **Minor Problems**

#### **Holding Times**

Samples P00GPW1F, P00GPW2F, P02GMW1F, and P00GPW3F were analyzed outside the required 28 day holding time for mercury. Non-detects, in the four samples were qualified "UL". There were no detects for mercury in these samples. All samples were analyzed within required 6 month holding time for other metals.

## Initial Calibration and Continuing Calibration

Antimony, Beryllium, Cadmium, and Arsenic were detected in the associated method blanks. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

## ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

### Laboratory Control Sample (LCS)

All required LCS recovery values were within +/- 20%

### **Duplicates**

All duplicates were within appropriate control limits.

#### Matrix Spike

Sample P4MW1GW4F was used for matrix spike/matrix spike duplicate. The sample was found to be outside CLP control limits of 75 - 125 % for Thallium in the matrix spike. Non-detects were qualified "UL". There were no detects for Thallium in any samples in this sample delivery group. The sample was within control limits for the matrix spike duplicate.

#### Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL". Spike element non-detects in samples with high spike recovery were not qualified. Non-detects, for the spike element, in samples with a spike recovery less than 10% were qualified "R".

### **ICP Serial Dilution**

Five fold dilution of P00GPW1F was performed in accordance with CLP requirements. Antimony and Zinc reported greater than 10% difference in the serial analysis. Qualifiers were not added since there were no positive results greater the 50 times the IDL.

Inorganic Data Validation CLP TAL Sampling Dates: August 1993

## Samples in SDG # 936422:

P04GMW2F P04GMW3 P02GMW9F P04GMW4	PFB6 P04GMW3F P02GMW9 P5MW3GW4 P8MW1GW4	P06GMW2 P06GMW1 P04GMW4F P2MW3GW4	P06GMW2F PB-ER5 PB-ER5F PBER08
P3MW1GW4	PSIVIVV I GVV4		•

## <u>Overview</u>

Eighteen water samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

#### Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

### Major Problems

None.

## Minor Problems

## **Holding Times**

All samples were analyzed within required holding times.

# Initial Calibration and Continuing Calibration

Beryllium, copper and antimony were detected in one or more of the method blanks. Zinc was detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

## ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

## Laboratory Control Sample (LCS)

All LCS recovery values were within +/- 20%.

### **Duplicates**

All duplicates were within the appropriate control limits.

### Matrix Spike

Sample P04W006F was used for matrix spike/matrix spike duplicate. Thallium reported a low recovery in the matrix spike. Detects for thallium were qualified "L". Non-detects were qualified "UL".

# Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL".

### **ICP Serial Dilution**

Sample P04W006F was used for the serial dilution. All elements met accuracy criteria.

Inorganic Data Validation CLP TAL Sampling Dates: August 1993

## Samples in SDG # 936424:

PBER9 P2MW2GW4 PBER10 PFB4 P03MW2GW4	P2MW9GW4	PBER07	P5MW1GW4
	P2MW4GW4	P4MW8GW4	P4MW1GW4
	P02GMW5	PBER12	PBER11
	PFB05	P05MW3GW4	PBER13
	P03MW3GW4	P03MW4GW4	P05MW4GW4

### **Overview**

Twenty water samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

### Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

## Major Problems

None.

## Minor Problems

## **Holding Times**

All samples were analyzed within required holding times.

# Initial Calibration and Continuing Calibration

### **Blanks**

Antimony, cadmium, copper, and silver were detected in the associated method blanks. Zinc was detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

### **ICP Interferences Check Samples**

All ICP recovery values were within +/- 20%

### Laboratory Control Sample (LCS)

All LCS recovery values were within +/- 20%

### **Duplicates**

All duplicates were within appropriate control limits.

### Matrix Spike

Sample P2MW2GW4 was used for the matrix spike/matrix spike duplicate. The sample was found to be outside CLP control limits of 75 - 125 %, for Thallium in the matrix spike. Thallium reported low spike recovery of 71.8%. Non-detects for thallium were qualified "U". Detects for thallium were qualified "L".

## Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL".

## **ICP Serial Dilution**

Five fold dilution of P2MW2GW4 was performed in accordance with CLP requirements. Copper reported greater than 10% difference in the serial analysis. Qualifiers were not added, since there were no positive results greater the 50 times the IDL.

Inorganic Data Validation CLP TAL Sampling Dates: August 1993

## Samples in SDG # 936426:

P5MW3GW4F	P3MW2GW4F	P3MW3GW4F	P3MW4GW4F
P5MW4GW4F	P5MW2GW4F	P6MW3GW4F	P3MW5GW4F
PER14F	P3MW9GW4F	P9MW1GW4F	P9MW2GW4F
P9MW3GW4F	P9MW5GW4F	P8MW2GW4F	P6MW5GW4F
P8MW9GW4F	P6MW4GW4F	P5MW6GW4F	PER17F

## **Overview**

Twenty water samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

### Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

## Major Problems

None.

## Minor Problems

## **Holding Times**

All samples were analyzed within required holding times.

# Initial Calibration and Continuing Calibration

Beryllium was detected in the method blanks. Zinc was detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

### ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

### Laboratory Control Sample (LCS)

All LCS recovery values were within +/- 20%.

#### **Duplicates**

All duplicates were within appropriate control limits.

#### Matrix Spike

Sample P3MW5GW4F was used for the matrix spike/matrix spike duplicate. The sample was found to be outside CLP control limits of 75 - 125 %, for thallium in the matrix spike. Thallium reported low recovery of 65.2%. Detects were qualified "L". Non-detects for these elements were qualified "UL".

#### Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL".

## **ICP Serial Dilution**

Five fold dilution of P3MW5GW4F was performed in accordance with CLP requirements. Zinc reported greater than 10% difference in the serial analysis. Qualifiers were not add, since there were no positive results greater the 50 times the IDL were qualified with a "J".

Inorganic Data Validation CLP TAL Sampling Dates: August 1993

## **Samples in SDG # 936427:**

P05MW2GW4	PER15	P6MW3GW4	P3MW5GW4
PER14	PBER-16	P3MW9GW4	P9MW1GW4
P9MW2GW4	P9MW3GW4	P9MW5GW4	P8MW2GW4
P6MW5GW4	P8MW9GW4	P6MW4GW4	P5MW6GW4
PER17	P8MW3GW4	P8MW4GW4	P6MW6GW4
PED I/	1 0141410011		

## <u>Overview</u>

Twenty water samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

## Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

### Major Problems

None.

## **Minor Problems**

## **Holding Times**

All samples were analyzed within recommended holding times.

## Initial Calibration and Continuing Calibration

All calibration results fell within the control limits of 90-110%.

Antimony, zinc, beryllium, cadmium, and copper were detected in the associated method blanks. Zinc was detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

### **ICP Interferences Check Samples**

All ICP recovery values were within +/- 20%

## Laboratory Control Sample (LCS)

All required LCS recovery values were within +/- 20%

### **Duplicates**

All duplicates were within appropriate control limits.

#### Matrix Spike

Sample P3MW5GW4 was used for the matrix spike/matrix spike duplicate. All target elements were within CLP control limits for the matrix spike. The sample was found to be outside CLP control limits of 75 - 125%, for selenium in the matrix spike duplicate. Selenium report a high recovery of 127.5%. Non-detects were not qualified. There were no detects for selenium in any samples in this sample delivery group.

## Furnace Atomic Absorption QC Analysis

Several samples failed to meet recovery limits for one or more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater then 10% were qualified "UL".

### **ICP Serial Dilution**

Five fold dilution of P3MW5GW4 was performed in accordance with CLP requirements. Antimony and zinc reported greater than 10% difference in the serial analysis. Qualifiers were not added, since there were no positive results greater the 50 times the IDL.

Inorganic Data Validation CLP TAL Sampling Dates: August 1993

## Samples in SDG # 936429:

P8MW3GW4F P5MW5GW4F P7MW1GW4F P3MW6GW4F P1MW3GW4F		P5MW7GW4F P9MW4FW4F P2MW6GW4F P1MW4GW4F
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### <u>Overview</u>

Sixteen water samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

#### Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

## **Major Problems**

None.

### Minor Problems

## **Holding Times**

All samples were analyzed within required holding times. Two samples P5MW7GW4F and PER18F exceeded the allowed pH of 2. Detects in these samples were qualified "L". Non-detects were qualified "UL".

# Initial Calibration and Continuing Calibration

#### **Blanks**

Antimony was detected in the associated method blanks. Zinc was detected in one or more of the associated field blanks and or equipment rinseates. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

## ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

### Laboratory Control Sample (LCS)

All LCS were within control limits.

### **Duplicates**

All duplicates met the required control limits.

#### Matrix Spike

Sample P2MW6GW4F was used for the matrix spike/matrix spike duplicate. The sample was found to be outside the CLP control limits of 75 - 125%, for lead and thallium in the matrix spike. Lead and thallium reported low spike recoveries of 73.8% and 34.7% respectively. Non-detects for both elements were qualified "UL". Detects for both elements were qualified "L".

## Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL".

### **ICP Serial Dilution**

Five fold dilution of P2MW6GW4F was performed in accordance with CLP requirements. Zinc reported greater than 10% difference in the serial analysis. qualifiers were not added, since there were no positive results greater the 50 times the IDL.

Inorganic Data Validation CLP TAL Sampling Dates: August 1993

## **Samples in SDG # 936430:**

P5MW7GW4 P9MW4GW4 P2MW7GW4 PFR18	P5MW5GW4 PFB07 P2MW6GW4 P1MW4GW4	P6MW8GW4 P7MW1GW4 P3MW6GW4	P6MW9GW4 P1MW2GW4 P1MW3GW4
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## <u>Overview</u>

Fourteen water samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

## **Summary**

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

## Major Problems

None.

## Minor Problems

## **Holding Times**

All samples were analyzed within required holding times.

# Initial Calibration and Continuing Calibration

#### **Blanks**

Antimony, copper, selenium, and zinc were detected in the associated method blanks. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

### **ICP Interferences Check Samples**

All ICP recovery values were within +/- 20%

## Laboratory Control Sample (LCS)

All LCS recovery values were within +/- 20%

#### <u>Duplicates</u>

All duplicates were within the appropriate control limit.

## Matrix Spike

Sample P2MW6GW4 was used for the matrix spike/matrix spike duplicate. The sample was found to be outside the CLP control limits of 75 - 125%, for thallium and selenium in the matrix spike. Thallium reported low spike recovery of 54.7%, selenium reported high spike recovery of 149%. Non-detects for thallium were qualified "UL". Detects for thallium were qualified "K". Non-detects for selenium were not qualified.

### Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL".

### **ICP Serial Dilution**

Five fold dilution of P2MW6GW4 was performed in accordance with CLP requirements. Silver and zinc reported greater than 10% difference in the serial analysis. Qualifiers were not add, since there were no positive results greater the 50 times the IDL.

Inorganic Data Validation CLP TAL Sampling Dates: September 1993

## Samples in SDG # 936434:

P1M12GW4F P3MW7GW4F P5MW9GW4F P5MW8GW4F P8MW5GW4F P1M13GW4F P7MW2GW4F PER20F P7MW3GW4F P1M14GW4F P1MW1GW4F P1M11GW4F P6M10GW4F PER21F P1M6GW4F P9MW6GW4F

### **Overview**

Sixteen water samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

### Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

### Major Problems

None.

## Minor Problems

## **Holding Times**

All samples were analyzed within required holding times.

## Initial Calibration and Continuing Calibration

#### **Blanks**

Cadmium, zinc, antimony, selenium, and arsenic were detected in the associated method blanks. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

### ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

## **Laboratory Control Sample (LCS)**

All LCS recovery values were within +/- 20%.

### <u>Duplicates</u>

Zinc exceeded the control limits of +/-20% for sample detects greater than 5 times the CRDL or +/- the CRDL for sample detects less than 5 times the CRDL for the duplicates. Zinc was qualified "J" in all samples.

#### Matrix Spike

Sample P5MW9GW4F was used for the matrix spike/matrix spike duplicate. The sample was found to be outside the CLP control limits of 75 - 125% for selenium and thallium in the matrix spike. Selenium and thallium reported low recoveries of 28.6 and 68.5% respectively. Detects for selenium were qualified "J", non-detects were qualified "R". Detects for thallium were qualified "L". Non-detects for thallium were qualified "UL".

### Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL".

### **ICP Serial Dilution**

Five fold dilution of P5MW9GW4F was performed in accordance with CLP requirements. Zinc reported greater than 10% difference in the serial analysis. Qualifiers were not added,

since there were no positive results greater the 50 times the IDL.

Inorganic Data Validation CLP TAL Sampling Dates: September 1993

## Samples in SDG # 936437:

P5MW9GW4	P5MW8GW4	P3MW7GW4	PER19
P1M12GW4	PER20	P7MW2GW4	P1M13GW4
P8MW5GW4	P1M11GW4	P1MW1GW4	P7MW3GW4
P9MW6GW4	P1MW6GW4	PER21	P6M10GW4

### **Overview**

Seventeen water samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

### Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

### Major Problems

None.

### Minor Problems

## **Holding Times**

All samples were analyzed within required holding times. Two samples P5MW9GW4 and P1M6GW4 exceeded the required pH of 2. Detects in these samples were qualified "L". Non-detects were qualified "UL".

## Initial Calibration and Continuing Calibration

Selenium was detected in the method blanks. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

## ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

## Laboratory Control Sample (LCS)

All LCS recovery values were within +/- 20%.

## <u>Duplicates</u>

All duplicates within appropriate control limits.

### Matrix Spike

Sample P1M14GW4 was used for the matrix spike/matrix spike duplicate. The sample was found to be outside the CLP control limits of 75 - 125% for selenium and thallium in the matrix spike. Selenium and thallium reported low recoveries of 41.2 and 33.8% respectively. Detects were qualified "L". Non-detects for these elements were qualified "UL".

## Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL". Spike element detects in samples with spike recovery greater then 115% were qualified "K".

#### ICP Serial Dilution

Five fold dilution of P1MW14GW4 was performed in accordance with CLP requirements. Zinc reported greater than 10% difference in the serial analysis. Qualifiers were not added, since there were no positive results greater the 50 times the IDL.

Inorganic Data Validation CLP TAL

Sampling Dates: July 1993

### Samples in SDG #937345:

P04D001	P04D001A	P04D002B	P04D002A
P04D003	P04D004A	P04D004B	P04D005A
P04D005B	P04D104B	P04D106B	P04D006B
P04D006A	P04D007	P04D008	P04D009A
P04D010A	P04D010B	P04D015	

### **Overview**

Twenty soil samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

## **Summary**

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

### Major Problems

None.

## **Minor Problems**

## **Holding Times**

All samples were analyzed within required holding times.

## Initial Calibration and Continuing Calibration

Arsenic exceeded the upper control limit during the initial and continuing calibrations. Detects for Arsenic were qualified "K". All other initial and continuing calibrations fell within the control limits of 90-110%.

Beryllium and zinc were detected in the associated method blanks. Zinc, copper, and lead were detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

# ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

# **Laboratory Control Sample (LCS)**

All LCS recovery values were within acceptable limits.

## **Duplicates**

All duplicates were within appropriate control limits.

## Matrix Spike

Sample P04D004 was used for the matrix spike/matrix spike duplicate. The sample was found to be outside the CLP control limits of 75 - 125%, for antimony in the matrix spike. Antimony reported a low spike recovery of 69%. Non-detects for antimony were qualified "L".

# Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL".

## ICP Serial Dilution

Five fold dilution of P3B120810 was performed in accordance with CLP requirements. Cobalt, copper, and zinc reported greater than 10% difference in the serial analysis. No qualifiers were added, since there were no positive results greater the 50 times the IDL.

Phelps Collins Alpena, MI Inorganic Data Validation CLP TAL Sampling Dates: August 1993

## Samples in SDG # 937349:

P04D017 P04D016 P00B10001	P04D013 P04D018 P00B10203 P08B20910	P04D011 P04D014 P00B10910 P08B30102	P04D012 P04D115 P08B20102 P08B30911
P08B20203	P08B20910	P08B30102	P08B30911
P08B40002	P08B41214		

## <u>Overview</u>

Eighteen soil samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

### Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

### **Major Problems**

None.

## **Minor Problems**

### **Holding Times**

All samples were analyzed within required holding times.

## Initial Calibration and Continuing Calibration

#### **Blanks**

Iron was detected in one or more of the associated method blanks. Lead, copper, and zinc were detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

## ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

## Laboratory Control Sample (LCS)

All elements reported acceptable results during the LCS analysis..

### **Duplicates**

All duplicates were within the appropriate control limits.

### Matrix Spike

Sample P08B30911 was used for matrix spike/matrix spike duplicate. Antimony and cadmium were outside the control limits of +/- 25%. Antimony and cadmium reported low spike recoveries of 67.9 and 70% respectively. Non-detects for both elements were qualified "UL". Detects for both elements were qualified "L".

## Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL". Spike element non-detects in samples with high spike recovery were not qualified.

### **ICP Serial Dilution**

Five fold dilution of P08B30911 was performed in accordance with CLP requirements. Zinc reported greater than 10% difference in the serial analysis. Qualifiers were not added since there were no positive results greater the 50 times the IDL.

Inorganic Data Validation CLP TAL Sampling Dates: August 1993

## Samples in SDG # 937352:

P02B60002 P08B71213 P02B80506 P08B70002 P02B90304	P08B61213 P08B60002 P02B80002 P02B90406 P08B80910	P00B20001 P02B40304 P02B70506 P08B81012 P6D2	P02B70002 P00B20203 P02B60506 P08B80102
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## **Overview**

Nineteen soil samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

## **Summary**

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

## Major Problems

None.

## Minor Problems

## **Holding Times**

All samples were analyzed within required holding times.

# Initial Calibration and Continuing Calibration

Silver, zinc, and arsenic were detected in the associated method blanks. Zinc was detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

## ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

## **Laboratory Control Sample (LCS)**

All LCS recoveries were within +/- 20%.

#### **Duplicates**

All duplicates were within appropriate control limits.

### Matrix Spike

Sample P02B40304 was used for the matrix spike/matrix spike duplicate. The sample was found to be outside the CLP control limits of 75 - 125%, for antimony and cadmium in the matrix spike. Antimony and cadmium reported low spike recoveries of 73.5 and 74.7%. Non-detects for both elements were qualified "UL". Detects for both elements were qualified "L".

## Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL".

### **ICP Serial Dilution**

Five fold dilution of P02B40304 was performed in accordance with CLP requirements. Chromium and zinc reported greater than 10% difference in the serial analysis. No qualifiers were added, since there were no positive results greater the 50 times the IDL.

Inorganic Data Validation CLP TAL Sampling Dates: August 1993

## Samples in SDG # 937354:

P6D1	P6D3	P6D4	P02B40002
P02B20405	P02B50405	P02B30405	P02B20002
P02B30507	P02B50002	P02B30002	P02B40405
P1B120002	P1B20002	P1B110304	P1B100002
P1R100304	P1B130304		

### <u>Overview</u>

Eighteen soil samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

### Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

## **Major Problems**

None.

### **Minor Problems**

### **Holding Times**

All samples were analyzed within required holding times.

## Initial Calibration and Continuing Calibration

Arsenic reported a low percent recovery of 89%. Detects for arsenic were qualified "L". Non-detects were qualified "UL". All other initial and continuing calibrations were within the control limits of 90-110%.

#### **Blanks**

Silver and arsenic were detected in one or more of the associated method blanks. Zinc was detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

### ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

## Laboratory Control Sample (LCS)

Mercury and thallium exceeded control limits LCS analysis. Mercury reported a high recovery of 131.5%, thallium reported a low recovery of 64.4%. Detects for thallium were qualified "L". Non-detects for cadmium were qualified "UL". Sample detects for mercury were qualified "K", non-detects were not qualified.

#### **Duplicates**

Lead exceeded the appropriate control limits of +/- 2xCRDL for sample detects less than 5 times the CRDL or +/- 20% for sample detects greater than 5 times CRDL. Lead was qualified "J" in all samples.

### Matrix Spike

Antimony, cadmium, lead, thallium, zinc, and nickel were outside the control limits of +/-25%. Antimony, chromium, thallium, zinc, and nickel reported low recoveries of 63.4, 62.9, 66.8, 14.1, and 73.8 respectively. Non-detects for elements reporting low recoveries were qualified "UL". Detects were qualified "L". Detects for lead, reporting a recovery of 390.1% were qualified "K". Non-detects for lead were not qualified.

# Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL". Spike element non-detects in samples with high spike recovery were not qualified.

## ICP Serial Dilution

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A five fold dilution was performed in accordance with CLP requirements. Chromium and nickel reported greater than 10% difference in the serial analysis. Qualifiers were not added since there were no positive results greater the 50 times the IDL.

Inorganic Data Validation CLP TAL Sampling Dates: August 1993

## Samples in SDG # 937355:

P01B90304	P01B90002	P01B70304
P01B80002	P01B60304	P01B60002
P01B50304	P01B40001	P01B40203
P3B110002	P3B111012	P3B120002
P3B130002	P3B131012	P3B130204
	P01B80002 P01B50304 P3B110002	P01B80002 P01B60304 P01B50304 P01B40001 P3B110002 P3B111012

## <u>Overview</u>

Twenty soil samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

## Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

## **Major Problems**

None.

## **Minor Problems**

### **Holding Times**

All samples were analyzed within required holding times.

## Initial Calibration and Continuing Calibration

#### **Blanks**

No target elements were detected in the associated method blanks. Zinc was detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

## ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

## Laboratory Control Sample (LCS)

All LCS recoveries were within acceptable limits.

#### **Duplicates**

Duplicates were within the appropriate control limits.

#### Matrix Spike

Sample P1B130002 was used for the matrix spike/matrix spike duplicate. The sample was found to be outside the CLP control limits of 75 - 125% for antimony and cadmium in the matrix spike. Antimony and cadmium reported low spike recoveries of 52.3 and 65.6% respectively. Non-detects for both elements were qualified "L".

## Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL".

### **ICP Serial Dilution**

Five fold dilution of P1B130002 was performed in accordance with CLP requirements. Zinc and chromium reported greater than 10% difference in the serial analysis. Qualifiers were not added, since there were no positive results greater the 50 times the IDL.

Inorganic Data Validation CLP TAL

Sampling Dates: August 1993

## Samples in SDG # 937356:

P3B200002

P3B110406

P3B120406

P3B130406

P3B120810

## **Overview**

Five soil samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

### Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

## **Major Problems**

None.

### Minor Problems

## **Holding Times**

All samples were analyzed within required holding times.

## Initial Calibration and Continuing Calibration

Arsenic exceeded the lower control limit during the initial and continuing calibrations. Detects for Arsenic were qualified "L". Non-detects were qualified "UL". All other initial and continuing calibrations fell within the control limits of 90-110%.

No target elements were detected in any of the associated method blanks. Zinc was detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

## ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

## Laboratory Control Sample (LCS)

All LCS recoveries were within acceptable control limits.

### **Duplicates**

All duplicates were within appropriate control limits

### Matrix Spike

Sample P3B120810 was used for matrix spike/matrix spike duplicate. The sample was found to be outside CLP control limits for antimony, arsenic, and cadmium in the matrix spike. Non-detects for elements displaying a low spike recovery, antimony (68.9%) and cadmium (69.3%) were qualified "UL". Detects for elements with low spike recovery were qualified "L". Non-detects for arsenic (128.1%) were not qualified. Detects for arsenic were qualified "K".

# Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL".

# ICP Serial Dilution

Five fold dilution of P3B120810 was performed in accordance with CLP requirements. Chromium, copper, and zinc reported greater than 10% difference in the serial analysis. Qualifiers were not added since there were no positive results greater the 50 times the IDL.

Phelps Collins Alpena, Mi Inorganic Data Validation CLP TAL Sampling Dates: September 1993

# Samples in SDG # 937358:

P2B100810 P1D003 P2B100001 P1D004 P2B100304 P1D001 P1D002 P1D005

## **Overview**

Eight soil samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

#### Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

# Major Problems

None.

## Minor Problems

## **Holding Times**

All samples were analyzed within required holding times.

# Initial Calibration and Continuing Calibration

All initial and continuing calibration results fell within the control limits of 90-110%.

#### <u>Blanks</u>

Zinc and selenium were detected in the associated method blanks. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

#### **ICP Interferences Check Samples**

All ICP recovery values were within +/- 20%

## Laboratory Control Sample (LCS)

All LCS were within the +/- 20%

#### **Duplicates**

All duplicates were within appropriate control limits.

#### Matrix Spike

Sample P2B100810 was used for matrix spike/matrix spike duplicate. The sample was found to be outside CLP control limits for antimony, cadmium, and lead in the matrix spike. Antimony, cadmium, and lead reported low spike recoveries of 69.2, 67.9, and 65.9% respectively. Non-detects were qualified "UL". Detects were qualified "L".

### Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL".

### ICP Serial Dilution

Five fold dilution of P2B100810 was performed in accordance with CLP requirements. Zinc reported greater than 10% difference in the serial analysis. Qualifiers were not added since there were no positive results greater the 50 times the IDL.

Hexavalent Chromium Data Validation

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Hexavalent Chromium Data Validation Sampling Dates: July-September 1993

# Phelps Collins Hexavalent Chromium - Soil Samples

Sample Group Da P3B110002 P3B130002 P3B110406	nted: 09/29 P3B111012 P3B131012 P3B120406	P3B120002 P3B130204 P3B130406	P3B121012 P3B200002
Sample Group Da P2B100810 P1D003	nted: 10/13 P2B100001 P1D004	P2B100304 P1D001	P1D002 P1D005
Sample Group Da P02B40405 P1B110304	nted: 09/23-1 P1B120002	P1B200002	P1B110002
Sample Group Da P08B70002 P02B90304 P6D1 P02B50405 P02B50002	P02B90406 P08B80910 P6D4 P02B30405 P02B30002	P08B81012 P6D2 P02B40002 P02B20002	P08B80102 P6D3 P02B20405 P02B30507
Sample Group D P08B20102 P08B30911 P08B61213 P08B60002 P02B80002	P08B20203 P08B40002 P00B20001 P02B40304 P02B70506	P08B20910 P08B41214 P02B70002 P00B20203 P02B60506	P08B30102 P02B60002 P08B71213 P02B80506
Sample Group D P1B100002 P01B90304 P01B80002 P01B40001	P1B100304 P1B90002 P01B60304 P01B40203	P1B130304 P1B70304 P01B60002 P01B80304	P1B130002 P01B70002 P01B50304

# **Overview**

Seventy-seven soil samples were analyzed according to SW-846 7196a requirements for analysis of Hexavalent Chromium.

#### Summary

All Sample were successfully analyzed for hexavalent chromium. One sample, P08B20910 contained a hexavalent chromium concentration above the detection limit. the QA/QC level was HAZWRAP Level C for all samples.

# **Major Problems**

None

#### **Minor Problems**

## **Holding Times**

All samples were analyzed within allowed holding times

## <u>Blanks</u>

There were no detects for hexavalent chromium in any on the associated blanks.

# Matrix Spike/Matrix Spike Duplicate

All matrix spike/matrix spike duplicates were within the 75 - 125% recovery criteria.

**TPH Data Validation** 

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Total Petroleum Hydrocarbons Data Validation Sampling Dates: July-September 1993

# Phelps Collins Total Petroleum Hydrocarbons - Soil Samples

			-
Sample Group Dated P04D001	P04D001A	P04D002B	P04D002A P04D005A
P04D003	PORDOO4A	P04D004B	P040005A
P04D104B	P04D005B		
Sample Group Dated			D04D007
P04D106B	P04D006B	P04D006A	P04D007
P04D008	P04D009A	P04D009B	P04D010A
PO4D010B	P04D015		
Sample Group Dated			
P04D017	P04D013	P04D011	P04D012
P04D016	P04D018	P04D014	P04D115
Sample Group Date	d: 09/06		
P00B10001	P00B10203	P00B10910	P08B20102
P08B20203	P08B20910	P08B30102	P08B30911
P08B40002	P08B41214		
Sample Group Date	d: 09/16-1		
P02B60002	P08B61213	P00B20001	P02B70002
P08B71213	P08B60002	P02B40304	P02B80506
Sample Group Date	d: 09/16-2		
P02B80002	P02B70506	P02B60506	P08B70002
P02B90406	P08B1012	P08B80102	P02B90304
P08B80910			
Sample Group Date	d: 09/17		
P02B50002	P02B30002	P02B40405	
Sample Group Date	ed: 09/24-1		
P01B70304	P01B70002	P01B80002	P01B60304
P01B60002	P01B50002	P01B50304	P01B40001
P01B40203	P01B80304		

Sample Group Da	ted: 09/24-2 P02B50405	P02B30405	P02B20002
P02B20405	P1B120002	P1B200002	P1B110002
P02B0507 P1B110304	P1B120002	P1B100304	P1B130304
P1B130002	P01B90304	P01B90002	
11010002	,		
Sample Group Da	ted: 09/24-3		
P6D2	P6D3	P6D1	P6D4
P02B40002	P02B20405	P02B50405	P02B30405
P02B20002	P02B30507	•	
Sample Group Da			
P3B130406	P3B120810		
Sample Group Da	ted: 09/27-2		
P3B110002	P3B111012	P3B120002	P3B121012
P3B130002	P3B131012	P3B130204	P3B200002
P3B110406	P3B120406		
100110100			
Sample Group Da	ited: 10/15		
P2B100810	P2B100001	P2B100304	P1D002
P1D003	P1D004	P1D001	P1D005
District Calling To	tal Batralaum Hydroc	arbons - Soil Samples	1
Phelps Collins To	tal Petroleum Hydroc	arbons - Soil Samples	
		<u>arbons - Soil Samples</u>	
Phelps Collins To Sample Group Da PFB1		arbons - Soil Samples P04W002	P04W003
Sample Group Da	ated: 08/25		
Sample Group Da PFB1 P04W004	nted: 08/25 P04W001		
Sample Group Da PFB1 P04W004 Sample Group Da	nted: 08/25 P04W001 nted: 08/31	P04W002	P04W003
Sample Group Da PFB1 P04W004 Sample Group Da PFB2	nted: 08/25 P04W001 nted: 08/31 P04W007	P04W002 P04W006	P04W003
Sample Group Da PFB1 P04W004 Sample Group Da PFB2 P04W005	nted: 08/25 P04W001 nted: 08/31	P04W002	P04W003
Sample Group Da PFB1 P04W004 Sample Group Da PFB2	nted: 08/25 P04W001 nted: 08/31 P04W007	P04W002 P04W006	P04W003
Sample Group Da PFB1 P04W004 Sample Group Da PFB2 P04W005 PBER4	nted: 08/25 P04W001 ented: 08/31 P04W007 P04W106	P04W002 P04W006	P04W003
Sample Group Da PFB1 P04W004 Sample Group Da PFB2 P04W005 PBER4 Sample Group Da	ated: 08/25 P04W001 ated: 08/31 P04W007 P04W106	P04W002 P04W006	P04W003
Sample Group Da PFB1 P04W004 Sample Group Da PFB2 P04W005 PBER4 Sample Group Da P00GPW1	nted: 08/25 P04W001 ated: 08/31 P04W007 P04W106 ated: 09/09 P00GPW2	P04W002 P04W006 P04W008	P04W003 PBER1 PBER3
Sample Group Da PFB1 P04W004 Sample Group Da PFB2 P04W005 PBER4 Sample Group Da P00GPW1 P00GPW3	ated: 08/25 P04W001 ated: 08/31 P04W007 P04W106	P04W002 P04W006 P04W008	P04W003  PBER1 PBER3  P02GMW1
Sample Group Da PFB1 P04W004 Sample Group Da PFB2 P04W005 PBER4 Sample Group Da P00GPW1 P00GPW3 P04GMW3	nted: 08/25 P04W001 nted: 08/31 P04W007 P04W106 nted: 09/09 P00GPW2 P04GMW2 P06GMW1	P04W002 P04W006 P04W008	P04W003  PBER1 PBER3  P02GMW1
Sample Group Da PFB1 P04W004 Sample Group Da PFB2 P04W005 PBER4 Sample Group Da P00GPW1 P00GPW3	ated: 08/25 P04W001 ated: 08/31 P04W007 P04W106 ated: 09/09 P00GPW2 P04GMW2 P06GMW1	P04W002 P04W006 P04W008 PFB3 PFB6	P04W003  PBER1 PBER3  P02GMW1 P06GMW2
Sample Group Da PFB1 P04W004 Sample Group Da PFB2 P04W005 PBER4 Sample Group Da P00GPW1 P00GPW3 P04GMW3	ated: 08/25 P04W001 ated: 08/31 P04W007 P04W106 ated: 09/09 P00GPW2 P04GMW2 P06GMW1 ated: 09/10 P02GMW9	P04W002  P04W006 P04W008  PFB3 PFB6  P04GMW4	P04W003  PBER1 PBER3  P02GMW1 P06GMW2  P5MW3GW4
Sample Group Da PFB1 P04W004  Sample Group Da PFB2 P04W005 PBER4  Sample Group Da P00GPW1 P00GPW3 P04GMW3  Sample Group Da PBER5 PBER08	ated: 08/25 P04W001 ated: 08/31 P04W007 P04W106 ated: 09/09 P00GPW2 P04GMW2 P06GMW1 ated: 09/10 P02GMW9 P3MW1GW4	P04W002 P04W006 P04W008 PFB3 PFB6	P04W003  PBER1 PBER3  P02GMW1 P06GMW2
Sample Group Da PFB1 P04W004 Sample Group Da PFB2 P04W005 PBER4 Sample Group Da P00GPW1 P00GPW3 P04GMW3 Sample Group Da PBER5	ated: 08/25 P04W001 ated: 08/31 P04W007 P04W106 ated: 09/09 P00GPW2 P04GMW2 P06GMW1 ated: 09/10 P02GMW9	P04W002  P04W006 P04W008  PFB3 PFB6  P04GMW4	P04W003  PBER1 PBER3  P02GMW1 P06GMW2  P5MW3GW4

Sample Group Da P2MW3GW4 P2MW4GW4 PBER12	ted: 09/16 P2MW9GW4 P4MW8GW4 PBER11	PBER07 P4MW1GW4	P5MW1GW4 PBER10
Sample Group Da PFB3 P03MW2GW4 P05MW2GW4	ted: 09/23 PFB05 P03MW3GW4	P05MW3GW4 P03MW4GW4	PBER13 P05MW4GW4
Sample Group Da PER15 PBER16 P9MW3GW4	ted: 09/27 P6MW3GW4 P3MW9GW4 P9MW5GW4	P3MW5GW4 P9MW2GW4	PER14 P9MW1GW4
Sample Group Da P5MW5GW4 P7MW1GW4 PFB07	nted: 09/30 P6MW8GW4 P1MW2GW4 P3MW6GW4	P6MW9GW4 P2MW7GW4	P9MW4GW4 P2MW6GW4
Sample Group Da P8MW2GW4 P5MW6GW4 P6MW6GW4 Sample Group Da	P6MW5GW4 PER17 P5MW7GW4	P8MW9GW4 P8MW3GW4	P6MW4GW4 P8MW4GW4
P1MW3GW4 Sample Group Da PER18 P3MW7GW4 PER21	eted: 10/05 P1MW4GW4 PER19 P6M10GW4	P5MW9GW4 P9MW6GW4	P5MW8GW4 P1MW6GW4
Sample Group Da P1M12GW4 P8MW5GW4 P7MW3GW4	eted: 10/15 PER20 P1M11GW4	P7MW2GW4 P1MW1GW4	P1M13GW4 P1M14GW4

# **Overview**

One hundred and thirteen soil and one hundred and three water samples were analyzed according to method 418.1 requirements for analysis of Total Petroleum Hydrocarbons.

## **Summary**

All Samples were successfully analyzed for TPH. Several samples contained TPH concentration above the detection limit. the QA/QC level was HAZWRAP Level C for all

samples.

## **Major Problems**

None

### Minor Problems

# **Holding Times**

All samples were analyzed within allowed holding times

#### <u>Blanks</u>

TPH was detected in several of the associated blanks. Samples with concentration less than 5 times the concentration detected in any of the associated blanks were qualified "B". Sample detects greater than 5 times the blank concentration were not qualified. Non-detects were not qualified.

# Matrix Spike/Matrix Spike Duplicate

All matrix spike/matrix spike duplicates were within the 75 - 125% recovery criteria.

Volatile Organic Compound Data Validation

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Volatile Organic Data Validation SW 846 8010/820

Sampling Dates: July - August 1993

# Samples in SDG # 363

P04W001	PO4WOO2	P04W003	P04W004
PTB1	PTB2	PFB2	P04W007
P04W006	PBER1	P04W005	P04W106
P04W008	PTB3	PTB4	PBER3
PBER4	PTB5	PTB6	P00GPW1

#### Overview

Twenty water samples for SDG # 363 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

#### Summary

All samples were successfully analyzed for target compounds. Nine samples; P04W004, PTB1, PFB2, P04W007, P04W006, PBER1, P04W106, P04W008, and PTB3 required second column confirmation for halogenated compounds organic compounds. Eleven samples; P04W002, P04W003, P04W004, P04W007, P04W006, PBER1, PTB4, PBER3, PBER4, and PTB5 required second column confirmation for aromatic organic compounds. Several of the samples contained detects for various target compounds below the Contract Required Quanitation limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

#### **Major Problems**

None

#### Minor Problems

#### **Holding Times**

All initial analysis were performed within the required holding time of 14 days for preserved samples. The confirmation analysis of sample PTB1 was performed 1 day out of the required holding time of 14 days for preserved samples. Detects in PTB1 were qualified with a "J" for estimated. Non-detects associated with compounds detected in the initial analysis were qualified "UJ".

#### **Surrogates**

Sample P04W007 reported a low surrogate recovery for the surrogate BFB in the halogenated confirmation analysis. There were no associated detects in the sample, associated non-detects were qualified "UJ". All other samples met all required surrogate recovery limits.

#### Internal Standards

All internal standards met QC limits for area counts and retention times.

#### Calibration Criteria

Several compounds failed precision criteria (RSD < 20%, %D < 15%) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

#### Blanks

Sample detects for the common laboratory contaminants, methylene chloride, acetone, toluene, and 2-butanone, were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks. Sample detects for other compounds were qualified "B", if the detected concentration was less than 5 times the concentration detected in any of the associated blanks. Detects were not qualified if the concentration was greater than 10 times the concentration of the common laboratory contaminants or 5 times the concentration of other contaminants detected in all of the associated blanks. Non-detects were not qualified. The following sample detects were qualified "B" because of contamination in associated equipment rinseate, method blank, field blank and/or trip blank.

SAMPLE	COMPOUND
PFB2	Methylene Chloride
P04W007	Methylene Chloride
P04W006	Methylene Chloride
PBER1	Methylene Chloride
P04W005	Methylene Chloride
P04W106	Methylene Chloride
P04W001	Methylene Chloride

SAMPLE	COMPOUND	
P04W002 Methylene Chloride		
P04W003	Methylene Chloride	
P04W004	Methylene Chloride	
P04W008	Methylene Chloride	
P04W007	Chloroform	
P04W004	1,1,1-Trichloroethane	
P04W001	Toluene	
P04W002	Toluene	
P04W003	Toluene	
P04W004	Toluene	
PTB3	Toluene	
PTB4	Toluene	
PBER3	Toluene	
PBER4	Toluene	
PTB5	Toluene	
PTB6	Toluene	
P00GPW1	Toluene	
P04W004	Benzene	
PTB2	1,3-Dichlorobenzene	
P04W001	1,4-Dichlorobenzene	
PTB1	1,4-Dichlorobenzene	
P04W001	1,2-Dichlorobenzene	
PTB1	1,2-Dichlorobenzene	
PTB3	1,2-Dichlorobenzene	
PBER4	1,2-Dichlorobenzene	
PTB6	1,2-Dichlorobenzene	
POOGPW1	1,2-Dichlorobenzene	

# **Matrix Spike**

Sample P04W001was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) met all accuracy criteria for both the halogenated and aromatic MS/MSD. All of the relative percent recovery (RPD) met accuracy criteria for the halogenated MS/MSD. Three of the RPD's failed to meet accuracy criteria for the aromatic MS/MSD. Data was not qualified solely on matrix spike/matrix spike duplicate data.

No other problems were noted during the data validation.

Volatile Organic Data Validation SW 846 8010/8020

Sampling Dates: August 1993

# Samples in SDG # 365

P04D001	P04D001A	P04D002B	P04D002A
P04D003	P04D004A	P04D004B	P04D005A
P04D104B	P04D005B	P04D106B	P04D006B
P04D006A	P04D007	P04D008	P04D009A
P04D009B	P04D010A	P04D010B	P04D015

#### **Overview**

Twenty soil samples for SDG# 365 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

#### **Summary**

All samples were successfully analyzed for target compounds. Eighteen samples; P04D001, P04D001A, P04D002B, P04D002A, P04D003, P04D004A, P04D004B, P04D005A, P04D104B, P04D005B, P04D006B, P04D007, P04D008, P04D009A, P04D010A, P04D010B and P04D015 required second column confirmation for halogenated volatile organics. Four samples; P04D009A, P04D010A, P04D010B, and P04D015 required second column confirmation for aromatic volatile organics. Several samples contained detects for various target compounds below the Contract Required Quanitation Limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

#### **Holding Times**

All initial analysis were performed within the required holding time of 14 days samples. Nine samples; P04D001, P04D002A, P04D007, P04D008, P04D009A, P04D009B, P04D010A, P04D010B and P04D015 requiring second column confirmation, for halogenated target compounds, were analyzed 1 to 11 days out of the required holding time. All four samples; P04D009A, P04D010A, P04D010B, and P04D015 requiring second column analysis for aromatic target compounds were analyzed 3 to 11 days out of the required holding time. All target analytes detected out of holding time were qualified "J" for estimated. Non-detects that corresponded to a detect in the initial analysis were qualified "UJ".

#### Surrogates

Samples P04D005A, P04D005B, and P04D006A reported high recovery for the surrogate TCFM in the initial halogenated analysis. Samples P04D009A, P04D009B, P04D010A, and P04D010B reported low recovery for the surrogate BFB in either the initial and/or the confirmation halogenated analysis. Samples P04D009A, P04D010A, and P04D010B reported low surrogate recovery for BFB in either the initial and/or the confirmation aromatic analysis. Samples that reported high surrogate recoveries were not qualified. Associated detects in samples that reported low surrogate recoveries were qualified "J" for estimated. Associated non-detects were qualified "UJ". All other samples met all required halogenated and aromatic surrogate recovery limits.

#### Internal Standards

All internal standards met QC limits for area counts and retention times.

### Calibration Criteria

Several compounds failed precision criteria (RSD <20%, %D<15) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

#### **Blanks**

Sample detects for the common laboratory contaminants, methylene chloride, acetone, toluene, and 2-butanone, were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks. Sample detects for other compounds were qualified "B", if the detected concentration was less than 5 times the concentration detected in any of the associated blanks. Detects were not qualified if the concentration was greater than 10 times the concentration of the common laboratory contaminants or 5 times the concentration of other contaminants detected in all of the associated blanks. Non-detects were not qualified. The following sample detects were qualified "B" because of contamination in associated equipment rinseate, method blank, field blank and/or trip blank.

SAMPLE	COMPOUND
P04D001	Methylene Chloride
P04D002A	Methylene Chloride
P04D106B	Methylene Chloride
P04D006B	Methylene Chloride
P04D006A	Methylene Chloride
P04D007	Methylene Chloride
P04D008	Methylene Chloride
P04D009A	Methylene Chloride
P04D009B	Methylene Chloride
P04D010A	Methylene Chloride
P04D010B	Methylene Chloride
P04D015	Methylene Chloride
P04D001	Chloroform
P04D001A	Chloroform
P04D002B	Chloroform
P04D002A	Chloroform
P04D003	Chloroform
P04D004A	Chloroform
P04D004B	Chloroform
P04D005A	Chloroform
P04D104B	Chloroform
P04D005B	Chloroform
P04D106B	Chloroform
P04D006B	Chloroform
P04D006A	Chloroform
P04D007	Chloroform
P04D008	Chloroform
P04D009A	Chloroform
P04D009B	Chloroform

SAMPLE	COMPOUND
P04D010A	Chloroform
P04D010B	Chloroform
P04D015	Chloroform
P04D002A	1,1,1-Trichloroethane
P04D106B	1,1,1-Trichloroethane
P04D006A	1,1,1-Trichloroethane
P04D010B	1,1,1-Trichloroethane
P04D001	1,2-Dichlorobenzene
P04D003	1,2-Dichlorobenzene
P04D007	1,2-Dichlorobenzene
P04D008	1,2-Dichlorobenzene
P04D009B	1,2-Dichlorobenzene
P04D010B	1,2-Dichlorobenzene
P04D010B	Toluene
P04D010B	1,4-Dichlorobenzene
P04D010B	Dibromochloromethane

## Matrix Spikes

Sample P04D004 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) met all accuracy criteria for both the halogenated MS/MSD and aromatic MS/MSD. Relative percent difference (RPD) values met all accuracy criteria for the halogenated MS/MSD. RPD failed to meet accuracy criteria for 3 of the aromatic spike compounds. Data was not qualified solely on matrix spike/matrix spike duplicate data

No other problems were noted during the data validation.

Volatile Organic Data Validation SW 846 8010/8020

Sampling Dates: August 1993

# Samples in SDG # 368

P04D017 P04D016 P00B10001 P08B20203 P08B40002	P04D013 P04D018 P00B10203 P08B20910 P08B41214	P04D011 P04D014 P00B10910 P08B30102	P04D012 P04D015 P08B20102 P08B30911
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#### Overview

Eighteen soil samples for SDG# 368 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

#### Summary

All samples were successfully analyzed for target compounds. Fifteen samples; P04D017, P04D013, P04D011, P04D012, P04D016, P04D018, P04D014, P04D015, P00B10001, P00B10910, P08B20102, P08B30102, P08B30911, P08B40002 and P08B41214 required second column confirmation for halogenated volatile organics. Two samples P04D017 and P08B10001 required second column confirmation for aromatic volatile organics. Several samples contained detects for various target compounds below the Contract Required Quanitation Limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

### **Major Problems**

None.

## **Minor Problems**

#### **Holding Times**

The initial halogenated analysis for samples P04D017 and P08B10001 were performed 3 days out of holding times. The initial aromatic analysis for samples P04D017 and P08B10001 were performed 3 and 2 days respectively, out of the required holding time of 14 days. Fourteen samples; P04D017, P04D013, P04D011, P04D012, P04D016, P04D018, P04D014, P04D015, P00B10001, P00B10910, P08B30102, P08B30911, P08B40002, P08B41214 were confirmed for halogenated analytes out of required holding times by 3 to 26 days. P04D017 and P08B10001 were confirmed for aromatic compounds 26 and 3 days respectively, out of the required holding time. All target analytes detected out of holding time were qualified "J" for estimated. Non-detects, in samples confirmed out of holding times, that corresponded to a detect in the initial analysis was qualified "UJ". All other samples were analyzed within the required holding time.

#### Surrogates

Samples P08B30911, P08B40002, P08B41214 and P08B20102 reported the surrogate TCFM out of control limits in either the initial and/or the confirmation halogenated analysis. Samples P04D017, P08B30102, P08B10001, and P08B20102 failed to met required surrogate recovery limits for the surrogate BFB in either the initial and/or the confirmation halogenated analysis. Samples P04D017 and P08B10001 reported low surrogate recovery for the surrogate BFB in either the initial and/or the confirmation aromatic analysis. No qualifiers were added for samples that reported high surrogate recovery. Detects associated with low surrogate recovery were qualified "J" for estimated, non-detects were qualified "UJ". All other samples met all surrogate recovery limits for both halogenated and aromatic surrogates.

#### Internal Standards

All internal standards met QC limits for area counts and retention times.

#### Calibration Criteria

Several compounds failed precision criteria (RSD <20%, %D<15) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

#### **Blanks**

Sample detects for the common laboratory contaminants, methylene chloride, acetone, toluene, and 2-butanone, were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks. Sample detects for other compounds were qualified "B", if the detected concentration was less than 5 times the concentration detected in any of the associated blanks. Detects were not qualified if the concentration was greater than 10 times the concentration of the common laboratory contaminants or 5 times the concentration of other contaminants detected in all of the associated blanks. Non-detects were not qualified. The following sample detects were qualified "B" because of contamination in associated equipment rinseate, method blank, field blank and/or trip blank.

SAMPLE	COMPOUND
P04D014	Methylene Chloride
P04D115	Methylene Chloride
P00B10001	Methylene Chloride
P00B10203	Methylene Chloride
P00B10910	Methylene Chloride
P08B20102	Methylene Chloride
P04D017	Methylene Chloride
P04D013	Methylene Chloride
P04D011	Methylene Chloride
P04D012	Methylene Chloride
P04D016	Methylene Chloride
P04D018	Methylene Chloride
P08B20203	Methylene Chloride
P08B20910	Methylene Chloride
P08B30102	Methylene Chloride
P08B30911	Methylene Chloride
P08B40002	Methylene Chloride
P08B41214	Methylene Chloride
P04D013	Chloroform
P04D011	Chloroform
P04D012	Chloroform
P04D016	Chloroform
P04D018	Chloroform
P04D014	Chloroform
P04D115	Chloroform
P00B10203	Chloroform
P00B10910	Chloroform
P08B20102	Chloroform
P08B20203	Chloroform

SAMPLE	COMPOUND	
P08B20910 Chloroform		
P08B30102	Chloroform	
P08B30911	Chloroform	
P08B40002	Chloroform	
P08B41214	Chloroform	
P04D011	1,1,1-Trichloroethane	
P04D018	1,1,1-Trichloroethane	
P04D014	1,1,1-Trichloroethane	
P04D115	1,1,1-Trichloroethane	
P00B10001	1,1,1-Trichloroethane	
P00B10203	1,1,1-Trichloroethane	
P00B10910	a a a Tiblese others	
P08B20102	1,1,1-Trichloroethane	
P08B20203	4.4.4 Tichlercethone	
P08B20910	1,1,1-Trichloroethane	
P08B30102	1,1,1-Trichloroethane	
P08B30911	1,1,1-Trichloroethane	
P08B40002	1,1,1-Trichloroethane	
P04D017	7.1	
P08B20102	Toluene	
P08B20203	Toluene	
P08B20910		
P08B30911	Talana	
P08B40002	Toluene	
P08B41214	Toluene	
P08B20102	o-Xylene	
P08B20203		
P08B30102	o-Xylene	
P08B30911 o-Xylene		

SAMPLE	COMPOUND	
P08B40002	o-Xylene	
P08B41214	o-Xylene	
P08B309111	Styrene	
P04D017	1,3-Dichlorobenzene	
P08B30911	1,3-Dichlorobenzene	
P08B20910	1,4-Dichlorobenzene	
P0830102	1,4-Dichlorobenzene	
P08B30102	Dibromochloromethane	
PO8B30102	Bromoform	

# **Matrix Spikes**

Sample P04D011 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) failed to meet accuracy criteria for methylene chloride in the matrix spike and matrix spike duplicate. Spike recovery met all accuracy criteria for the aromatic MS/MSD. Relative percent difference (RPD) values met all accuracy criteria for both the halogenated and aromatic MS/MSD.

No other problems were noted during the data validation.

Volatile Organic Data Validation SW 846 8010/8020

Sampling Dates: August 1993

# Samples in SDG # 369

POOGPW2	PFB3	P02GMW1	POOGMW1
PTB7	P04GMW2	PFB6	PO6GMW2
PO4GMW3	PTB8	P06GMW1	PB-ER5
PO2GMW9	P04GMW4	P-TB9	P5MW3GW4
P04GMW3	PTB8	P06GMW1	

PTB10

#### **Overview**

Seventeen water samples for SDG# 369 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

#### Summary

All samples were successfully analyzed for target compounds. Five samples;PFB3, POOGPW3, PTB9, P5MW3GW4, and PO6GMW1 required second column confirmation for halogenated volatile organics. Five samples; PTB7, PTB9, P5MW3GW4, PFB6, and PO4GMW3 required second column confirmation for aromatic volatile organics. Several samples contained detects for various target compounds below the Contract Required Quanitation Limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

# **Major Problems**

None.

#### **Minor Problems**

# **Holding Times**

All initial analysis were performed within the required holding time of 14 days for preserved samples. One sample, PFB3, requiring second column conformation analysis was analyzed 1 day out of required holding times. Based on professional judgement qualifiers were not added to confirmation results which did not indicate compound loss, between the initial and conformation analysis.

#### Surrogates

Samples P06GMW1, PTB9, and P5MW3GW4 failed to meet the surrogate recovery limits for TCFM in either the initial or conformation analysis. Samples which reported high surrogate recoveries were not qualified. Detects in samples which reported low surrogate recoveries were qualified "J" for estimated, non-detects were qualified "UJ". All other samples met all required surrogate recovery limits.

#### Internal Standards

All internal standards met QC limits for area counts and retention times.

#### Calibration Criteria

Several compounds failed precision criteria (RSD < 20%, %D < 15) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

#### <u>Blanks</u>

Sample detects for the common laboratory contaminants, methylene chloride, acetone, toluene, and 2-butanone, were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks. Sample detects for other compounds were qualified "B", if the detected concentration was less than 5 times the concentration detected in any of the associated blanks. Detects were not qualified if the concentration was greater than 10 times the concentration of the common laboratory contaminants or 5 times the concentration of other contaminants detected in all of the associated blanks. Non-detects were not qualified. The following sample detects were qualified "B" because of contamination in associated equipment rinseate, method blank, field blank and/or trip blank.

SAMPLE	COMPOUND	
P00GPW3	Methylene Chloride	
PFB6	Methylene Chloride	
PTB8	Methylene Chloride	
P-TB9	Methylene Chloride	
P5MW3GW4	Methylene Chloride	
PTB10	Methylene Chloride	
PFB6	1,1,1-Trichloroethane	
POOGPW2	Toluene	
PFB3	Toluene	
P02GMW1	Toluene	
POOGPW3	Toluene	
PTB7	Toluene	
P04GMW2	Toluene	
P06GMW2	Toluene	
P04GMW3	Toluene	
PTB8	Toluene	
P06GMW1	Toluene	
PB-ER5	Toluene	
P02GMW9	Toluene	
P04GMW4	Toluene	
РТВ9	Toluene	
PTB10	Toluene	
PFB6	1,3-Dichlorobenzene	
PB-ER5	1,3-Dichlorobenzene	
P02GMW9	1,3-Dichlorobenzene	
PO4GMW4	1,3-Dichlorobenzene	
P04GMW2	1,4-Dichlorobenzene	
P06GMW1	1,4-Dichlorobenzene	

SAMPLE	COMPOUND
PB-ER5	1,4-Dichlorobenzene
P02GMW9	1,4-Dichlorobenzene
P04GMW4	1,4-Dichlorobenzene
P00GPW2	1,4-Dichlorobenzene
P02GMW1	1,4-Dichlorobenzene
P00GPW3	1,4-Dichlorobenzene
P00GPW2	1,2-Dichlorobenzene
PFB3	1,2-Dichlorobenzene
P02GMW1	1,2-Dichlorobenzene
P00GPW3	1,2-Dichlorobenzene
P06GMW3	1,2-Dichlorobenzene
P06GMW1	1,2-Dichlorobenzene
PB-ER5	1,2-Dichlorobenzene
P02GMW9	1,2-Dichlorobenzene
P04GMW4	1,2-Dichlorobenzene

# **Matrix Spikes**

Sample P00GPW3 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) and relative percent difference (RPD) values met accuracy criteria.

No other problems were noted during the data validation.

Volatile Organic Data Validation SW 846 8010/8020

Sampling Dates: August 1993

#### Samples in SDG # 372

P2MW3GW4 PBER9 PBER08 P2MW9GW4 P3MW1GW4 PBER07 P8MW1GW4 P5MW1GW4

P2MW2GW4

P2MW4GW4

PTB12

TB

#### Overview

Twelve water samples for SDG# 372 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

#### Summary

All samples were successfully analyzed for target compounds. Sample P8MW1GW4 required second column confirmation for halogenated volatile organics. Six samples; PBER07, PTB12, TB, PBER08, P3MW1GW4, and P2MW9GW4 required second column confirmation for aromatic volatile organics. Sample P5MW1GW4 required dilution and reanalysis for the aromatic analysis. Several samples contained detects for various target compounds below the Contract Required Quanitation Limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

## **Major Problems**

None.

#### Minor Problems

#### **Holding Times**

All initial analysis were performed within the required holding time of 14 days for preserved samples. The aromatic confirmation analysis for samples PTB12, TB, and PBER08 were performed 1 to 29 days out of the required holding time. All other samples were analyzed within holding time.

#### **Surrogates**

Sample P8MW1GW4 and P2MW2GW4 reported high surrogate recovery for the halogenated surrogate TCFM in the initial analysis. Samples reporting high surrogate recoveries were not qualified. All other samples met all required halogenated and aromatic surrogate recovery limits.

#### Internal Standards

All internal standards met QC limits for area counts and retention times.

#### Calibration Criteria

Several compounds failed to met required precision criteria (RSD < 20%, %D< 15) during the initial and/or the continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

#### <u>Blanks</u>

Sample detects for the common laboratory contaminants, methylene chloride, acetone, toluene, and 2-butanone, were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks. Sample detects for other compounds were qualified "B", if the detected concentration was less than 5 times the concentration detected in any of the associated blanks. Detects were not qualified if the concentration was greater than 10 times the concentration of the common laboratory contaminants or 5 times the concentration of other contaminants detected in all of the associated blanks. Non-detects were not qualified. The following sample detects were qualified "B" because of contamination in associated equipment rinseate, method blank, field blank and/or trip blank.

SAMPLE	COMPOUND	
P8MW1GW4	Methylene Chloride	
PBER07	Toluene	
P5MW1GW4	Toluene	
P2MW2GW4	Toluene	
P2MW4GW4	Toluene	
PTB12	Toluene	
ТВ	Toluene	
P2MW3GW4	Toluene	
PBER08	Toluene	
P3MW1GW4	Toluene	
PBER9	Toluene	
P2MW9GW4	Toluene	
P2MW3GW4	1,3-Dichlorobenzene	
P3MW1GW4	1,3-Dichlorobenzene	
P8MW1GW4	1,3-Dichlorobenzene	
P5MW1GW4RE	1,3-Dichlorobenzene	
P2MW4GW4	1,4-Dichlorobenzene	
P2MW2GW4	1,2-Dichlorobenzene	
P2MW4GW4	1,2-Dichlorobenzene	
P2MW3GW4	1,2-Dichlorobenzene	
PBER9	1,2-Dichlorobenzene	

# Matrix Spikes

Sample P2MW2GW4 was used for the matrix spike/matrix spike duplicate. 2-CEVE was not detected in the halogenated matrix spike or matrix spike duplicate. Spike recovery (SR) values met all accuracy criteria in both the halogenated and the aromatic MS/MSD. Relative percent difference (RPD) met all accuracy criteria in both the halogenated and the aromatic MS/MSD. Qualifiers were not added solely on matrix spike/matrix spike duplicate data.

No other problems were noted during the data validation.

Volatile Organic Data Validation 601/602

Sampling Dates: August 1993

Samples in SDG # 372A

PBER10

PTB113

PTB14

PBER12

PBER11

### Overview

Five water samples for SDG # 372A were validated for volatile organic compounds analyzed by 601/602 methodology.

### Summary

All samples were successfully analyzed for target compounds. Four samples; PBER10, PBER11, PTB13, and PTB14 required second column confirmation for halogenated compounds organic compounds. Four samples, PBER11, PBER12, PTB13, and PTB14 required second column confirmation for aromatic organic compounds. Several samples contained detects for various target compounds below the Contract Required Quanitation limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

#### Major Problems

Due to an error at the laboratory the samples were analyzed using 601/602 methodology and not the required 8010/8020 methodology.

#### Minor Problems

#### **Holding Times**

All initial analysis were performed within the required holding time of 14 days for preserved samples. All confirmation analysis were performed 1 to 15 days out of holding times. Detects in the sample confirmed out of holding times were qualified with a "J" for estimated. Non-detects associated with compounds detected in the initial analysis were qualified "UJ".

# **Surrogates**

All samples met required surrogate recovery limits.

# Internal Standards

All internal standards met QC limits for area counts and retention times.

# Calibration Criteria

Several compounds failed precision criteria (RSD < 20%, %D < 15%) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

#### **Bianks**

SAMPLE	COMPOUND
PBER10	Methylene Chloride
PBER11	Methylene Chloride
PBER12	Methylene Chloride
PTB13	Methylene Chloride
PTB14	Methylene Chloride
PBER11	Benzene
PBER12	Benzene
PTB13	Benzene
PTB14	Benzene
PBER10	Toluene
PBER11	Toluene
PBER12	Toluene
PTB13	Toluene
PTB14	Toluene
PBER10	1,4-Dichlorobenzene
PTB13	1,4-dichlorobenzene
PBER10	1,2-Dichlorobenzene
PTB13	1,2-Dichlorobenzene

Sample P2MW2GW4 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) failed to met accuracy criteria for two halogenated MS/MSD. All spike recoveries met accuracy criteria for the aromatic MS/MSD. All relative percent recoveries (RPD) met accuracy criteria for the halogenated MS/MSD. Three RPD's failed to meet accuracy criteria for the aromatic MS/MSD. Data was not qualified solely on matrix spike/matrix spike duplicate data.

Volatile Organic Data Validation SW 846 8010/8020

Sampling Dates: August 1993

# Samples in SDG # 373

BUSESULE PUSESUUUS FUSESUUUS	P08B70002			P02B7000 P00B2020 P02B6050 P08B8010
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# **Overview**

Nineteen soil samples for SDG# 373 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

### Summary

All samples were successfully analyzed for target compounds. Sixteen samples; P02B60002, P08B61213, P00B20001, P0870002, P08B60002, P02B40304, P00B20203, P0280506, P02B80002, P02B70506, P02B60506, P02B70002, P08B81012, P08B80102, P08B90304, and P6D2 required second column confirmation for halogenated volatile organics. Five samples; P08B61213, P08B60002, P08B80102, P02B90304, and P6D2 required second column confirmation for aromatic volatile organics. All samples contained detects for various target compounds below the Contract Required Quanitation Limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

#### Major Problems

None.

# **Minor Problems**

## **Holdina Times**

The initial halogenated and aromatic analysis for sample P02B40304 were performed 1 day out of holding time. The initial aromatic analysis for P02B90304 was performed 11 days out of holding time. All other initial analysis were performed within the required holding time of 14 days. All confirmation analysis were performed from 9 to 26 days out of the required holding time.

## <u>Surrogates</u>

Samples P02B90406, P00B20203, P02B80506, P02B70506, P02B60506, P02B60002, and P6D2 failed to meet required surrogate recovery limits for the surrogate TCFM in either the initial and/or the confirmation halogenated analysis. Samples P08B70002, P08B81012, P08B80102, P08B61213, P02B70002, P08B60002, and P6D2 failed to meet required surrogate recovery limits for the surrogate BFB in either the initial and/or the confirmation halogenated analysis. Samples P08B80102, P08B61213, P08B60002, and P6D2 failed surrogate recovery limits for the surrogate BFB in either the initial and/or the confirmation aromatic analysis. Samples were not qualified for surrogates reporting high recoveries. Samples with detects associated with low surrogate recovery were qualified "J" for estimated, non-detects were qualified "UJ". All other samples met all required halogenated and aromatic surrogate recovery limits.

### Internal Standards

All internal standards met QC limits for area counts and retention times.

#### **Calibration Criteria**

Several compounds failed precision criteria (RSD <20%, %D<15) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

#### **Blanks**

SAMPLE	COMPOUND
P02B40304	Methylene Chloride
P02B80506	Methylene Chloride
P02B80002	Methylene Chloride
P02B70506	Methylene Chloride
P02B60506	Methylene Chloride
P08B61213	Methylene Chloride
P00B20001	Methylene Chloride
P08B70002	Methylene Chloride
P08B71213	Methylene Chloride
P02B70002	Methylene Chloride
P02B90406	Methylene Chloride
P08B81012	Methylene Chloride
P08B80102	Methylene Chloride
P08B80910	Methylene Chloride
P6D2	Methylene Chloride
P02B40304	Chloroform
P00B20203	Chloroform
P02B80506	Chloroform
P02B80002	Chloroform
P02B70506	Chloroform
P02B60506	Chloroform
P02B60002	Chloroform
P08B61213	Chloroform
P00B20001	Chloroform
P08B70002	Chloroform
P08B71213	Chloroform
P08B60002	Chloroform
P02B70002	Chloroform
P02B90406	Chloroform

SAMPLE	COMPOUND
P08B81012	Chloroform
P08B80102	Chloroform
P02B90304	Chloroform
P08B80910	Chloroform
P6D2	Chloroform
P00B20203	1,1,1-Trichloroethane
P02B80506	1,1,1-Trichloroethane
P02B0002	1,1,1-Trichloroethane
P02B70506	1,1,1-Trichloroethane
P00B20001	1,1,1-Trichloroethane
P08B71213	1,1,1-Trichloroethane
P08B60002	1,1,1-Trichloroethane
P02B70002	1,1,1-Trichloroethane
P08B80102	1,1,1-Trichloroethane
P02B90304	1,1,1-Trichloroethane
P02B40304	Toluene
P02B80506	Toluene
P02B80002	Toluene
P02B70506	Toluene
P02B60506	Toluene
P02B60002	Toluene
P00B20001	Toluene
P08B70002	Toluene
P08B71213	Toluene
P02B70002	Toluene
P00B20203	1,4-Dichlorobenzene
P02B80506	1,4-Dichlorobenzene
P02B60506	1,4-Dichlorobenzene
P02B60002	1,4-Dichlorobenzene

SAMPLE	COMPOUND
P6D2	1,2-Dichlorobenzene

Sample P02B40304 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) values met all accuracy criteria for both the halogenated and the aromatic MS/MSD. Relative percent difference (RPD) values met all accuracy criteria for both the halogenated

and aromatic MS/MSD.

Volatile Organic Data Validation SW 846 8010/820

Sampling Dates: August 1993

### Samples in SDG # 374

P6D3	P6D1	P6D4	P02B40002
P02B20405	P02B50405	P02B30405	P02B20002
P02B30507	P02B50002	P02B30002	P02B40405
P1B120002	P1B20002	P1B110002	P1B110304
P1B100002	P1B100304	P1B130304	P1B130002

## **Overview**

Twenty soil samples for SDG # 374 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

#### Summary

All samples were successfully analyzed for target compounds. Twelve samples; P6D3, P6D4, P1B12002, P1B1200002, P1B110304, P1B100002, P1B100304, P02B20002, P02B50002, P1B130304 and P1B130002 required second column confirmation for halogenated organic compounds. Five samples; P6D3, P6D1, P6D4, P02B20002, and P02B50002 required second column confirmation for aromatic organic compounds. Several samples contained detects for various target compounds below the Contract Required Quanitation limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

## Major Problems

None

#### Minor Problems

#### **Holding Times**

All initial analysis were performed within the required holding time of 14 days. The halogenated confirmation analysis for samples; P6D3, P6D4, P02B20002, and P02B0002 was performed 10 to 14 days out of holding time. The aromatic confirmation for samples; P6D3, P6D1, P6D4, P02B20002, and P02B50002 requiring confirmation was performed 10 to 17 days out of holding time. Detects in the samples confirmed out of holding times were qualified with a "J" for estimated. Non-detects associated with compounds detected in the initial analysis were qualified "UJ".

## Surrogates -

Samples P1B20002, P1B110002, P1B100304, P02B20002,P6D3, and P6D4 failed to met surrogate recovery limits for TCFM in either the initial and/or the confirmation halogenated analysis for the surrogate TCFM. Samples P1B10002, P1B100304, P02B2002, P02B50002, P6D3, and P6d4 failed to met surrogate recovery limits for the surrogate BFB in either the initial and/or the confirmation halogenated analysis. Samples P02B20002, P02B50002, P6D3, and P6D4 failed to met surrogate recovery limits for the surrogate BFB in either the initial and/or the confirmation aromatic analysis. Samples which reported high surrogate recoveries were not qualified. Associated detects in samples which reported low surrogate recoveries were qualified "J" for estimated, non-detects were qualified "UJ". All other samples met all required surrogate recovery limits.

# Internal Standards

TCFM was outside the retention window in samples P1B130304, P1B13002, P1B12002, P1B11002, and P1B10304 no qualifiers were added because TCFM is not a target analyte and the samples were not significantly outside the retention times. All other internal standards met QC limits for area counts and retention times.

### Calibration Criteria

Several compounds failed precision criteria (RSD < 20%, %D < 15%) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

### **Blanks**

SAMPLE	COMPOUND	
P6D3	Methylene Chloride	
P6D1	Methylene Chloride	
P6D4	Methylene Chloride	
P02B40002	Methylene Chloride	
P02B20405	Methylene Chloride	
P02B50405	Methylene Chloride	
P1B110304	Methylene Chloride	
P02B30405	Methylene Chloride	
P02B20002	Methylene Chloride	
P02B50002	Methylene Chloride	
P02B30002	Methylene Chloride	
P02B40405	Methylene Chloride	
P1B130002	Methylene Chloride	
P6D3	Chloroform	
P6D1	Chloroform	
P6D4	Chloroform	
P02B40002	Chloroform	
P02B20405	Chloroform	
P02B50405	Chloroform	
P1B120002	Chloroform	
P1B200022	Chloroform	
P1B110002	Chloroform	
P1B110304	Chloroform	
P1B100002	Chloroform	
P1B100304	Chloroform	
P02B30405	Chloroform	
P02B20002	Chloroform	
P02B30507	Chloroform	
P02B50002	Chloroform	

SAMPLE	COMPOUND	
P02B30002	Chloroform	
P02B40405	Chloroform	
P1B130304	Chloroform	
P1B130002	Chloroform	
P6D1	1,1,1-Trichloroethane	
P6D4	1,1,1-Trichloroethane	
P02B20405	1,1,1-Trichloroethane	
P02B50405	1,1,1-Trichloroethane	
P1B120002	1,1,1-Trichloroethane	
P1B200002	1,1,1-Trichloroethane	
P1B110002	1,1,1-Trichloroethane	
P1B100304	1,1,1-Trichloroethane	
P02B30405	1,1,1-Trichloroethane	
P02B20002	1,1,1-Trichloroethane	
P02B30507	1,1,1-Trichloroethane	
P02B50002	1,1,1-Trichloroethane	
P1B130304	1,1,1-Trichloroethane	
P1B120002	Toluene	
P1B200002	Toluene	
P1B110002	Toluene	
P1B120002	Chlorobenzene	
P1B120002	o-Xylene	
P1B200002	o-Xylene	
P1B110002	o-Xylene	
P1B120002	Styrene	
P1B110002	Styrene	
P1B120002	1,3-Dichlorobenzene	
P1B110002	1,4-Dichlorobenzene	
P1B120002	.1,2-Dichlorobenzene	

SAMPLE	COMPOUND	
P1B110002	1,2Dichlorobenzene	
P6D3	Chloroform	
P02B50405	1,3-Dichlorobenzene	

Sample P6D3 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) failed to meet accuracy criteria for 3 halogenated and 1 aromatic spike compound for the MS/MSD. All of the relative percent recovery (RPD) met accuracy criteria for the halogenated MS/MSD. Four of the RPD's failed to meet accuracy criteria for the aromatic MS/MSD. Data was not qualified solely on matrix spike/matrix spike duplicate data.

Volatile Organic Data Validation SW 846 8010/8020

Sampling Dates: August 1993

# Samples in SDG # 377

P01B80002 P01B50304 P3B110002	P01B90002 P01B60304 P01B40001 P3B111012 P3B131012	P01B70304 P01B60002 P01B40203 P3B120002 P3B130204	P01B70002 P01B50002 P01B80304 P3B121012 P3B200002
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## **Overview**

Twenty soil samples for SDG# 377 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

# Summary

All samples were successfully analyzed for target compounds. Eighteen samples; P01B90304, P01B90002, P01B70304, P01B70002, P01B80002, P01B80304, P3B110002, P3B111012, P3B120002, P3B121012, P01B60002, P01B50002, P01B50304, P01B40001, P01B40203, P01B60304, P3B130204, and P3B200002 required second column confirmation for halogenated volatile organics. No sample required second column confirmation for aromatic volatile organics. Several samples contained detects for various target compounds below the Contract Required Quanitation Limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

#### **Major Problems**

None.

## **Minor Problems**

# **Holding Times**

All initial and confirmation analysis were performed within the required holding time of 14 days.

### Surrogates

Samples P01B90002, P01B70002, P01B50002, P01B50304, P01B60304, P3B111012, P3B120002, P3B121012, and P3B130204 failed to meet the halogenated surrogate recovery limits for TCFM and/or BFB in either the initial or conformation analysis. Samples P01B70002 and P3B120002 failed to meet aromatic surrogate recovery limits for BFB. Samples which reported high surrogate recoveries were not qualified. Detects in samples which reported low surrogate recoveries were qualified "J" for estimated, non-detects were qualified "UJ". All other samples met all required surrogate recovery limits.

## **Internal Standards**

TCFM was reported outside of the required retention window for sample P08B60304. No qualifiers were added since TCFM is not a target analyte and the retention window was not grossly exceeded. All other internal standards met QC limits for area counts and retention times.

### Calibration Criteria

Several compounds failed precision criteria (RSD < 20%, %D < 15) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

## **Blanks**

SAMPLE	COMPOUND
P01B90304	Methylene Chloride
P01B90002	Methylene Chloride
P01B70304	Methylene Chloride
P01B80002	Methylene Chloride
P01B80304	Methylene Chloride
P01B60002	Methylene Chloride
P01B50002	Methylene Chloride
P01B50304	Methylene Chloride
P01B40001	Methylene Chloride
P01B40203	Methylene Chloride
P03B11002	Methylene Chloride
P3B111012	Methylene Chloride
P3B120002	Methylene Chloride
P3B121012	Methylene Chloride
P3B130002	Methylene Chloride
P3B131012	Methylene Chloride
P3B130204	Methylene Chloride
P3B200002	Methylene Chloride
P01B90304	Chloroform
P01B90002	Chloroform
P01B70304	Chloroform
P01B80002	Chloroform
PO1B80304	Chloroform
P01B60002	Chloroform
P01B50002	Chloroform
P01B50304	Chloroform
P01B40001	Chloroform
P01B40203	Chloroform

SAMPLE	COMPOUND
P01B60304	Chloroform
P3B110002	Chloroform
P3B111012	Chloroform
P3B120002	Chloroform
P3B121012	Chloroform
P3B131002	Chloroform
P3B131012	Chloroform
P3B130204	Chloroform
P3B200002	Chloroform
P01B90304	1,1,1-Trichloroethane
P01B70304	1,1,1-Trichloroethane
P01B70002	1,1,1-Trichloroethane
P01B80002	1,1,1-Trichloroethane
P01B80304	1,1,1-Trichloroethane
P01B60002	1,1,1-Trichloroethane
P01B50304	1,1,1-Trichloroethane
P01B40001	1,1,1-Trichloroethane
P01B40203	1,1,1-Trichloroethane
P01B60304	1,1,1-Trichloroethane
P3B121012	1,1,1-Trichloroethane
P3B130002	1,1,1-Trichloroethane
P3B131012	1,1,1-Trichloroethane
P3B131012	Trichloroethene
P01B90304	Toluene

SAMPLE	COMPOUND
P01B90002	Toluene
P01B70304	Toluene
P01B80002	Toluene
P01B60002	Toluene
P01B50002	Toluene
P01B40203	Toluene
P3B110002	Toluene
P3B130002	Toluene
P01B90304	o-Xylene
P01B90002	o-Xylene
P01B70304	o-Xylene
P01B80002	o-Xylene
P01B60002	o-Xylene
P3B130002	Styrene
P01B80002	1,3-Dichlorobenzene
P01B80304	1,3-Dichlorobenzene
P01B50002	1,3-Dichlorobenzene
P01B50304	1,3-Dichlorobenzene
P01B40203	1,3-Dichlorobenzene
P01B50304	1,4-Dichlorobenzene
P3B130002	1,4-Dichlorobenzene

Sample P01B90304 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) met all accuracy criteria in both the halogenated and aromatic MS/MSD. Relative percent difference (RPD) values failed on 2 of the 35 spiking compounds for the halogenated MS/MSD and 1 of the 12 spiking compounds for the aromatic MS/MSD. Qualifiers were not added solely on matrix spike/matrix spike duplicate data.

Volatile Organic Data Validation SW 846 8010/8020

Sampling Dates: August 1993

# Samples in SDG # 379

PTB	PFB4	PFB05	PTB16
P05MW3GW4	PBER13	P03MW2GW4	P3MW3GW4
P03MW4GW4	P05MW4GW4	P05MW2GW4	PTB17
PER15	P6MW3GW4	P3MW5GW4	PER14
PBFR-16	P3MW9GW4	PTB18	P9MW1GW4

#### Overview

Twenty water samples for SDG# 379 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

## Summary

All samples were successfully analyzed for target compounds. Five samples; PFB4, P6MW3GW4, P03MW2GW4, PTB17, and P9MW1GW4 required second column confirmation for halogenated volatile organics. Sample PFB05 required second column confirmation for aromatic volatile organics. All samples contained detects for various target compounds below the Contract Required Quanitation Limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

## **Major Problems**

None.

## **Minor Problems**

# **Holding Times**

The initial halogenated analysis for sample PFB4 was performed 4 days out of holding times. Two halogenated confirmation for samples, P03MW2GW4 and PTB17 and the aromatic confirmation for PFB05 was performed out of the required holding time by 1 to 3 days. All other samples were analyzed within holding time of 14 days for preserved samples. Detects in samples initially analyzed out of holding times were qualified "J" for estimated. Non-detects in samples confirmed out of holding times were qualified "J" for estimated. Non-detects corresponding to detects in the initial analysis were qualified "UJ".

## **Surrogates**

Sample PFB4 reported low halogenated surrogate recovery for TCFM in the initial analysis. Sample PO3MW2GW4 reported low halogenated surrogate recovery for BFB in the initial analysis. Detects for target compounds in samples relating to the surrogates were qualified "J" for estimated, non-detects were qualified "UJ". All other samples met all required halogenated and aromatic surrogate recovery limits.

# **Internal Standards**

All internal standards met QC limits for area counts and retention times.

# Calibration Criteria

All compounds met required precision criteria (RSD < 20%) for initial calibration. Several compounds failed precision criteria (%D < 15) during continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

### **Blanks**

SAMPLE	COMPOUND	
PFB4	Methylene Chloride	
P03MW2GW4	Methylene Chloride	
P03MW3GW4	Methylene Chloride	
P03MW4GW4	Methylene Chloride	
P05MW4GW4	Methylene Chloride	
PP05MW2GW4	Methylene Chloride	
PTB17	Methylene Chloride	
PER15	Methylene Chloride	
P6MW3GW4	Methylene Chloride	
P3MW5GW4	Methylene Chloride	
PER14	Methylene Chloride	
PBER-16	Methylene Chloride	
P3MW9GW4	Methylene Chloride	
PTB18	Methylene Chloride	
P9MW1GW4	Methylene Chloride	
PTB17	Chloroform	
P3MW5GW4	1,1,1-Trichloroethane	
PER14	1,1,1-Trichloroethane	
PBER-16	1,1,1-Trichloroethane	
P3MW9GW4	1,1,1-Trichloroethane	
PFB05	Benzene	
РТВ	Toluene	
PFB4	Toluene	
PFB05	Toluene	
PTB16	Toluene	
P05MW3GW4	Toluene	
PBER13	Toluene	
P03MW2GW4	Toluene	
P03MW3GW4	Toluene	

SAMPLE	COMPOUND	
P03MW4GW4	Toluene	
P05MW4GW4	Toluene	
P05MW2GW4	Toluene	
PTB17	Toluene	
PER15	Toluene	
P05MW4GW4	Ethylbenzene	
P05MW2GW4	Ethylbenzene	
PER15	Ethylbenzene	
PTB	1,4-Dichlorobenzene	
PBER13	1,4-Dichlorobenzene	
P03MW2GW4	1,2-Dichlorobenzene	
P03MW3GW4	1,2-Dichlorobenzene	
P03MW4GW4	1,2-Dichlorobenzene	
P05MW4GW4	1,2-Dichlorobenzene	
P05MW2GW4	1,2-Dichlorobenzene	
PTB17	1,2-Dichlorobenzene	
PER15	1,2-Dichlorobenzene	

Sample P3MW5GW4 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) values failed for two spiking compounds in the halogenated MS/MSD. Spike recovery met all accuracy criteria in the aromatic MS/MSD. Relative percent difference (RPD) failed on 1 compound in the halogenated matrix spike/matrix spike duplicate. RPD values met all accuracy criteria for the aromatic MS/MSD. Qualifiers were not added solely on matrix spike/matrix spike duplicate data.

Volatile Organic Data Validation SW 846 8010/8020

Sampling Dates: August 1993

Samples in SDG # 381

P3B110406

P3B120406

P3B120810

P3B130406

#### Overview

Four soil samples for SDG# 381 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

### Summary

All samples were successfully analyzed for target compounds. Sample P3B120810 required second column confirmation for halogenated volatile organics. No sample required second column confirmation for aromatic volatile organics. All samples contained detects for various target compounds below the Contract Required Quanitation Limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

## Major Problems

None.

## **Minor Problems**

# **Holding Times**

All initial and confirmation analysis were performed within the required holding time of 14 days.

# Surrogates

Sample P3B120810 reported low halogenated surrogate recovery for BFB in the confirmation analysis. Detects for target compounds in sample P3B120810 relating to the surrogate BFB were qualified "J" for estimated, non-detects were qualified "UJ". All other samples met required halogenated and aromatic surrogate recovery limits.

### Internal Standards

All internal standards met QC limits for area counts and retention times.

## Calibration Criteria

Several compounds failed precision criteria (RSD < 20%, %D < 15%) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

### **Blanks**

SAMPLE	COMPOUND
P3B110406	Methylene Chloride
P3B120406	Methylene Chloride
P3B120810	Methylene Chloride
P3B130406	Methylene Chloride
P3B110406	Chloroform
P3B120406	Chloroform
P3B120810	Chloroform
P3B130406	Chloroform
P3B110406	1,1,1-Trichloroethane
P3B120406	1,1,1-Trichloroethane
P3B120810	1,1,1-Trichloroethane
P3B130406	Toluene
P3B110406	Toluene
P3B120406	Toluene
P3B120810	Toluene
P3B130406	Toluene
P3B110406	o-Xylene
P3B120406	o-Xylene
P3B130810	o-Xylene
P3B130406	o-Xylene
P3B120810	1,4-Dichlorobenzene
P3B130406	1,4-Dichlorobenzene
PCB110406	1,2-Dichlorobenzene
P3B120810	1,2-Dichlorobenzene

Sample P3B110406 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) values failed on methylene chloride in both the matrix spike and duplicate for the halogenated MS/MSD. Spike recovery met all accuracy criteria in the aromatic MS/MSD. Relative percent difference (RPD) values met all accuracy criteria for both the halogenated and aromatic MS/MSD. Qualifiers were not added solely on matrix spike/matrix spike duplicate data.

Volatile Organic Data Validation SW 846 8010/8020

Sampling Dates: September 1993

### Samples in SDG # 383

PTB22	P7MW1GW4	P1MW2GW4	P2MW7GW4
P2MW6GW4	PTB23	P3MW6GW4	P1MW3GW4
PER18	P1MW4GW4	PTB24	PTB25
P5MW9GW4	P5MW8GW4	P3MW7GW4	PER19
P1M12GW4	PER20	P7MW2GW4	P1M13GW4

## **Overview**

Twenty water samples for SDG# 383 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

### **Summary**

All samples were successfully analyzed for target compounds. Five samples; PTB22, P2MW7GW4, P5MW8GW4, P3MW7GW4, and PER19 required second column confirmation for halogenated volatile organics. Three samples; P3MW6GW4, PER18, and P7MW2GW4 required second column confirmation for aromatic volatile organics. Several samples contained detects for various target compounds below the Contract Required Quanitation Limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

## **Major Problems**

None.

## **Minor Problems**

#### **Holding Times**

All initial and confirmation analysis were performed within the required holding time of 14 days for preserved samples.

## Surrogates

All samples met required halogenated and aromatic surrogate recovery limits.

# Internal Standards

All internal standards met QC limits for area counts and retention times.

# Calibration Criteria

Several compounds failed precision criteria (RSD < 20%, %D < 15) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

## **Blanks**

SAMPLE	COMPOUND	
P5MW9GW4	Methylene Chloride	
P5MW8GW4	Methylene Chloride	
P3MW7GW4	Methylene Chloride	
PER19	Methylene Chloride	
P1M12GW4	Methylene Chloride	
PER20	Methylene Chloride	
PER18	Methylene Chloride	
P1MW4GW4	Methylene Chloride	
PTB24	Methylene Chloride	
PTB25	Methylene Chloride	
PTB22	Methylene Chloride	
P7MW1GW4	Methylene Chloride	
P2MW7GW4	Methylene Chloride	
P2MW2GW4	Methylene Chloride	
P1M13GW4	Methylene Chloride	
PER19	chloroform	
P7MW1GW4	1,1,1-Trichloroethane	
P5MW9GW4	Toluene	
P5MW8GW4	Toluene	
P3MW7GW4	Toluene	
PER19	Toluene	
P1M12GW4	Toluene	
PER20	Toluene	
PER18	Toluene	
P1MW1GW4	Toluene	
PTB24	Toluene	
PTB25	Toluene	
P7MW2GW4	Toluene	
P1MW13GW4	Toluene	

SAMPLE	COMPOUND
P5MW8GW4	1,3-Dichlorobenzene
PER19	1,3-Dichlorobenzene
PER20	1,3-Dichlorobenzene
P3MW6GW4	1,3-Dichlorobenzene
P1MW3GW4	1,3-Dichlorobenzene
PER18	1,3-Dichlorobenzene
P1MW4GW4	1,3-Dichlorobenzene
PTB25	1,3-Dichlorobenzene
PTB22	1,3-Dichlorobenzene
P7MW1GW4	1,3-Dichlorobenzene
P1MW2GW4	1,3-Dichlorobenzene
P2MW6GW4	1,3-Dichlorobenzene
PTB23	1,3-Dichlorobenzene
P7MW2GW4	1,3-Dichlorobenzene
P1MW13GW4	1,3-Dichlorobenzene
P5MW8GW4	1,4-Dichlorobenzene
PER19	1,4-Dichlorobenzene
P1M12GW4	1,4-Dichlorobenzene
PER20	1,4-Dichlorobenzene
P1MW3GW4	1,4-Dichlorobenzene
P1MW4GW4	1,4-Dichlorobenzene
PTB24	1,4-Dichlorobenzene
PTB25	1,4-Dichlorobenzene
PTB22	1,4-Dichlorobenzene
P1MW2GW4	1,4-Dichlorobenzene
P2MW7GW4	1,4-Dichlorobenzene
P2MW6GW4	1,4-Dichlorobenzene
PTB23	1,4-Dichlorobenzene
P1MW13GW4	1,4-Dichlorobenzene

SAMPLE	COMPOUND
P5MW9GW4	1,2-Dichlorobenzene
P5MW8GW4	1,2-Dichlorobenzene
P3MW7GW4	1,2-Dichlorobenzene
P3MW6GW4	1,2-Dichlorobenzene
P1MW3GW4	1,2-Dichlorobenzene
PER18	1,2-Dichlorobenzene
P1MW4GW4	1,2-Dichlorobenzene
PTB24	1,2-Dichlorobenzene
PTB22	1,2-Dichlorobenzene
P1MW2GW4	1,2-Dichlorobenzene
P2MW7GW4	1,2-Dichlorobenzene
P2MW6GW4	1,2-Dichlorobenzene
PTB23	1,2-Dichlorobenzene

Sample P2MW6GW4 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) met all accuracy criteria for both the halogenated MS/MSD and aromatic MS/MSD. Relative percent difference (RPD) values met all accuracy criteria for both the halogenated and aromatic MS/MSD.

Volatile Organic Data Validation SW 846 8010/8020

Sampling Dates: August 1993

# Samples in SDG # 382

P9MW2GW4 P8MW2GW4 P5MW6GW4 P6MW6GW4 P6MW8GW4 P6MW8GW4 P6MW8GW4	P9MW5GW4 P8MW9GW4 P8MW3GW4 P5MW5GW4 P9MW4GW4	PTB19 P6MW4GW4 P8MW4GW4 PTB20 PFB07
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## **Overview**

Twenty water samples for SDG# 382 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

#### **Summary**

All samples were successfully analyzed for target compounds. Five samples; P8MW2GW4, P6MW5GW4, P8MW3GW4, P6MW6GW4, and P9MW4GW4 required second column confirmation for halogenated volatile organics. Two samples P6MW5GW4 and P6MW8GW4 required second column confirmation for aromatic volatile organics. Several samples contained detects for various target compounds below the Contract Required Quanitation Limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

# **Major Problems**

None.

# Minor Problems

# **Holding Times**

All initial analysis were performed within the required holding time of 14 days for preserved samples. Two samples P8MW2GW4 and P6MW5GW4 requiring second column confirmation, for halogenated target compounds, were confirmed 4 and 5 days out of holding times respectively. Sample P6MW5GW4 requiring second column analysis for aromatic target compounds was confirmed 5 days out of holding time. All target analytes that were detected out of holding time were qualified "J" for estimated. Non-detects in samples confirmed out of holding times that corresponded to a detect in the initial analysis was qualified "UJ".

### **Surrogates**

Sample PFB07 reported high surrogate recovery for BFB in the aromatic surrogate recovery. Qualifiers were not added for high surrogate recovery. All other samples met all surrogate recovery limits for both halogenated and aromatic surrogates.

### Internal Standards

All internal standards met QC limits for area counts and retention times.

## Calibration Criteria

Several compounds failed precision criteria (RSD <20%, %D<15) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

#### **Blanks**

SAMPLE	COMPOUND	
P9MW3GW4	Methylene Chloride	
P9MW5GW4	Methylene Chloride	
PTB19	Methylene Chloride	╝
P8MW2GW4	Methylene Chloride	
P6MW5GW4	Methylene Chloride	
P8MW9GW4	Methylene Chloride	
P6MW4GW4	Methylene Chloride	
PER17	Methylene Chloride	
P8MW3GW4	Methylene Chloride	
P8MW4GW4	Methylene Chloride	
P6MW6GW4	Methylene Chloride	
P5MW7GW4	Methylene Chloride	
P6MW8GW4	Methylene Chloride	
P6MW9GW4	Methylene Chloride	
P9MW4GW4	Methylene Chloride	
PFB07	Methylene Chloride	
PER17	Chloroform	
P8MW3GW4	Chloroform	
P8MW4GW4	Chloroform	
P5MW5GW4	Chloroform	
P9MW3GW4	1,1,1-Trichloroethane	
PER17	1,1,1-Trichloroethane	
P5MW5GW4	1,1,1-Trichloroethane	
P9MW5GW4	Toluene	
PTB19	Toluene	
P8MW2GW4	Toluene	
P8MW9GW4	Toluene	
P6MW8GW4	1,3-Dichlorobenzene	
P6MW9GW4	1,3-Dichlorobenzene	

SAMPLE	COMPOUND
P9MW4GW4	1,3-Dichlorobenzene
PFB07	1,3-Dichlorobenzene
P9MW5GW4	1,4-Dichlorobenzene
PTB19	1,4-Dichlorobenzene
P8MW2GW4	1,4-Dichlorobenzene
P6MW8GW4	1,4-Dichlorobenzene
P6MW9GW4	1,4-Dichlorobenzene
PFB07	1,4-Dichlorobenzene
P6MW5GW4	1,2-Dichlorobenzene
P6MW8GW4	1,2-Dichlorobenzene
P6MW9GW4	1,2-Dichlorobenzene
PFB07	1,2-Dichlorobenzene

Sample P9MW2GW4 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) met all accuracy criteria for both the halogenated MS/MSD and aromatic MS/MSD. Relative percent difference (RPD) values met all accuracy criteria for both the halogenated and aromatic MS/MSD.

Volatile Organic Data Validation SW 846 8010/820

Sampling Dates: September 1993

# Samples in SDG # 385

P2B100810

P2B100001

P2B100304

P1D002

P1D003

P1D004

P1D001

P1D005

## **Overview**

Eight soil samples for SDG # 385 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

### **Summary**

All samples were successfully analyzed for target compounds. Six samples; P2B100810, P2B100001, P2B100304, P1D002, P1D003, and P1D001 required second column confirmation for halogenated compounds organic compounds. Sample P2B100001 required second column confirmation for aromatic organic compounds. Several samples contained detects for various target compounds below the Contract Required Quanitation limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

# **Major Problems**

None

#### Minor Problems

## **Holding Times**

All initial and confirmation analysis were performed within the required holding time of 14 days.

### Surrogates

Samples P1D003 and P1D001 reported a high surrogate recovery for the surrogate TCFM in the halogenated confirmation analysis. Samples P2B100001 and P2B100304 reported low surrogate recovery for the surrogate BFB in the initial and/or confirmation halogenated analysis. Sample P2B100001 reported low surrogate recovery for BFB in the initial aromatic analysis. There were no associated detects in the samples, associated non-detects were qualified "UJ". All other samples met all required surrogate recovery limits.

#### **Internal Standards**

All internal standards met QC limits for area counts and retention times.

#### Calibration Criteria

Several compounds failed precision criteria (RSD < 20%, %D < 15%) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

#### <u>Blanks</u>

5

Sample detects for the common laboratory contaminants, methylene chloride, acetone, toluene, and 2-butanone, were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks. Sample detects for other compounds were qualified "B", if the detected concentration was less than 5 times the concentration detected in any of the associated blanks. Detects were not qualified if the concentration was greater than 10 times the concentration of the common laboratory contaminants or 5 times the concentration of other contaminants detected in all of the associated blanks. Non-detects were not qualified. The following sample detects were qualified "B" because of contamination in associated equipment rinseate, method blank, field blank and/or trip blank.

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SAMPLE	COMPOUND	
P2B100810	1,4-Dichlorobenzene	
P1D001	1,4-Dichlorobenzene	
P1D005	1,4-Dichlorobenzene	

# **Matrix Spike**

Sample P2B100810 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) met all accuracy criteria for both the halogenated and aromatic MS/MSD. Two of the relative percent recoveries (RPD) failed to meet accuracy criteria for the halogenated MS/MSD. One of the RPD's failed to meet accuracy criteria for the aromatic MS/MSD. Data was not qualified solely on matrix spike/matrix spike duplicate data.

Phelps Collins Alpena, MI

Volatile Organic Data Validation SW 846 8010/8020

Sampling Dates: September 1993

# Samples in SDG # 386

P8MW5GW4

PTB26 P7MW3GW4 P1M11GW4 P9MW6GW4 P1MW1GW4 PTB27

P1M14GW4 PTB28

P1MW6GW4

PER21

P6M10GW4

## **Overview**

Twelve water samples for SDG# 386 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

#### Summary

All samples were successfully analyzed for target compounds. Six samples; P1M14GW4, P7MW3GW4, P9MW6GW4, PTB27, PTB28 and PER21 required second column confirmation for halogenated volatile organics. Five samples; P1M11GW4, P1MW1GW4, P1M14GW4, P7MW3GW4, and PTB27 required second column confirmation for aromatic volatile organics. Sample P9MW6GW4 required dilution for volatile aromatic analysis. Several samples contained detects for various target compounds below the Contract Required Quanitation Limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

# **Major Problems**

None.

# **Minor Problems**

# **Holding Times**

The initial aromatic analysis for PTB28 was performed 2 days out of the required holding time of 14 days for preserved samples. The halogenated confirmation analysis for samples P9MW6GW4 and PTB28 were performed 8 days and 2 days, respectively, out of holding time. The dilution of sample P9MW6GW4, for aromatic analysis, was performed 12 days out of holding time. All other samples were analyzed within holding time. Detects in samples initially analyzed out of holding times were qualified "J" for estimated. Non-detects were not qualified. Detects in confirmation analysis performed out of holding times were qualified "J" for estimated. Non-detects corresponding to detects in the initial analysis were qualified "UJ".

#### Surrogates

Sample P1MW6GW4 reported high surrogate recovery for the surrogate BFB in the halogenated confirmation analysis. Samples reporting high surrogate recoveries were not qualified. All other samples met all required halogenated and aromatic surrogate recovery limits.

#### Internal Standards

All internal standards met QC limits for area counts and retention times.

## **Calibration Criteria**

All compounds met the required precision criteria (RSD < 20%) during the initial calibrations. Several compounds failed to met required precision criteria (%D<15) during the continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

### **Blanks**

Sample detects for the common laboratory contaminants, methylene chloride, acetone, toluene, and 2-butanone, were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks. Sample detects for other compounds were qualified "B", if the detected concentration was less than 5 times the concentration detected in any of the associated blanks. Detects were not qualified if the concentration was greater than 10 times the concentration of the common laboratory contaminants or 5 times the concentration of other contaminants detected in all of the associated blanks. Non-detects were not qualified. The following sample detects were qualified "B" because of contamination in associated equipment rinseate, method blank, field blank and/or trip blank.

SAMPLE	COMPOUND	
P8MW5GW4	Methylene Chloride	
PTB26	Methylene Chloride	
P1M11GW4	Methylene Chloride	
P1MW1GW4	Methylene Chloride	
P1M14GW4	Methylene Chloride	
P7MW3GW4	Methylene Chloride	
P9MW6GW4	Methylene Chloride	
PTB27	Methylene Chloride	
PTB28	Methylene Chloride	
P1MW6GW4	Methylene Chloride	
PER21	Methylene Chloride	
P6M10GW4	Methylene Chloride	
P8MW5GW4	Toluene	
PTB26	Toluene	
PTB27	Toluene	
P9MW6GW4	1,3-Dichlorobenzene	
PTB28	1,3-Dichlorobenzene	
PTB26	1,4-Dichlorobenzene	
PTB27	1,4-Dichlorobenzene	
P8MW5GW4	1,2-Dichlorobenzene	
PTB26	1,2-Dichlorobenzene	
P1M14GW4	Ethylbenzene	

# Matrix Spikes

Sample P1M14GW4 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) failed to met accuracy criteria for 5 spiking compounds for the halogenated MS/MSD. SR values met all accuracy criteria in the aromatic MS/MSD. Relative percent difference (RPD) met all accuracy criteria in both the halogenated and the aromatic MS/MSD. Samples were not qualified solely on matrix spike/matrix spike duplicate data.

Phelps Collins Alpena, MI

Volatile Organic Data Validation SW 846 8010/820

Sampling Dates: August 1993

Samples in SDG # 387

P02GMW5

P4MW8GW4

P4MW1GW4

#### **Overview**

Three water samples for SDG # 387 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

#### Summary

All samples were successfully analyzed for target compounds. Samples P4MW8GW4 and P4MW1GW4 required second column confirmation for halogenated volatile organic compounds. No sample required second column confirmation for aromatic organic compounds. Several of the samples contained detects for various target compounds below the Contract Required Quanitation limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

#### **Major Problems**

All holding times were exceeded by 33 days. All data was qualified "R"

#### **Minor Problems**

### **Holding Times**

All initial and confirmation analysis were performed outside of the required holding time of 14 days for preserved samples.

## Surrogates

All samples met all required surrogate recovery limits.

#### Internal Standards

All internal standards met QC limits for area counts and retention times.

Several compounds failed precision criteria (RSD < 20%, %D < 15%) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

#### **Blanks**

Sample detects for the common laboratory contaminants, methylene chloride, acetone, toluene, and 2-butanone, were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks. Sample detects for other compounds were qualified "B", if the detected concentration was less than 5 times the concentration detected in any of the associated blanks. Detects were not qualified if the concentration was greater than 10 times the concentration of the common laboratory contaminants or 5 times the concentration of other contaminants detected in all of the associated blanks. Non-detects were not qualified. The following sample detects were qualified "B" because of contamination in associated equipment rinseate, method blank, field blank and/or trip blank.

SAMPLE	COMPOUND	
P02GMW5	Methylene Chloride	
P4MW8GW4	Methylene Chloride	
P4MW1GW4	Methylene Chloride	
P4MW8GW4	Benzene	
P4MW8GW4	Toluene	
P4MW1GW4	1,2-Dichlorobenzene	

#### Matrix Spike

Sample P4MW1GW4 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) failed to meet accuracy criteria for two spiking compounds in the halogenated MS/MSD. All spike recovery criteria was met for the aromatic MS/MSD. One relative percent recoveries (RPD) failed to meet accuracy criteria for the halogenated MS/MSD. All RPD's met accuracy criteria for the aromatic MS/MSD. Data was not qualified solely on matrix spike/matrix spike duplicate data.

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Semi-Volatile Organic Compound Data Validation-CLP

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Phelps Collins Alpena, MI Semi-Volatile Organic Date Validation CLP Sampling Date September 1993

# Samples in SDG # 1065

P5MW7GW4 P8MW2GW4 PER17	P6MW4GW4 P8MW3GW4

## **Overview**

Eleven water samples for SDG# 1065 were validated for semi-volatile organic compounds analyzed using LCBNA 10/92 methodology.

## **Summary**

All samples were successfully analyzed for target compounds. No sample contained target compounds above the Contact Required Quantitation Limit (CRQL). Several samples contained target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

## Major Problems

None

# **Minor Problems**

# **Holding Times**

All samples were extracted and analyzed within recommended holding times.

### **GC/MS Tune**

4-Chloroaniline failed precision criteria, RSD <30%, during initial calibration. Several compounds failed precision criteria, %D <25%, during continuing calibrations. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

#### **Blanks**

The associated method blank contained bis(2-Ethylhexyl)phthalate. No target analytes were detected in the associated field blanks or equipment rinseates. Sample detects for the common phthalate contaminant were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks or equipment rinseates. Detects were not qualified "B", if the sample concentration was greater than 10x the concentration of the common laboratory contaminant detected in any of the associated blanks or equipment rinseates. Non-detects were not qualified.

### **Surrogates**

All surrogates met recovery criteria.

## Laboratory Control Sample

The laboratory control sample met all recovery criteria.

#### Internal Standards

No problems were associated with the internal standards.

Phelps Collins Alpena, MI Semi-Volatile Organic Date Validation CLP Sampling Date September 1993

# Samples in SDG # 1101

P1D001

P1D002

P1D003

P1D004

P1D005

P2B100001

P2B100304

P2B100810

#### **Overview**

Eight soil samples for SDG# 1101 were validated for semi-volatile organic compounds analyzed using CLP methodology.

### Summary

All samples were successfully analyzed for target compounds. No sample contained target compounds above the Contact Required Quantitation Limit (CRQL). No sample contained target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

## Major Problems

None

# **Minor Problems**

## **Holding Times**

All samples were extracted and analyzed within recommended holding times.

### GC/MS Tune

No compounds failed precision criteria, RSD <30%, during initial calibration. Several compounds failed precision criteria, %D <25%, during continuing calibrations. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

#### **Blanks**

No target compounds were detected in the associated method blanks. Phenol and di-n-butyl phthalate were detected in one or more of the associated field blanks and or equipment rinseates. Non-detects were not qualified.

## Surrogates

All surrogates met recovery criteria.

# Matrix Spike/Matrix Spike Duplicate

Sample P2B1003004 was used for the matrix spike/matrix spike duplicate. One of the twenty-two spike compounds was out of control limits for spike recovery. Eight of the eleven compounds were outside control limits for ,RPD, relative percent difference. The samples were not qualified based on matrix spike/matrix spike duplicate data.

### Internal Standards

No problems were associated with the internal standards.

Phelps Collins Alpena, MI Semi-Volatile Organic Date Validation CLP Sampling Date September 1993

# Samples in SDG # 1146

P1M11GW4 P1M6GW4 P7MW2GW4	P1M12GW4 P1MW1GW4 P7MW3GW4 PFR20	P1M13GW4 P2MW5GW4 P8MW5GW4 PER21	P1M14GW4 P6M10GW4 P9MW5GW4
P9MW6GW4	PER20	PER21	

### Overview

Fifteen water samples for SDG# 1146 were validated for semi-volatile organic compounds analyzed using LCBNA 10/92 methodology.

### Summary

All samples were successfully analyzed for target compounds. Two samples; P1M6GW4 and P9MW6GW4, contained target compounds above the Contact Required Quantitation Limit (CRQL). Several samples contained various target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

# **Major Problems**

None

# Minor Problems

## **Holding Times**

All samples were extracted and analyzed within recommended holding times.

### **GC/MS Tune**

Several compounds failed precision criteria (RSD <30%, %D<25%) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

#### **Blanks**

Bis(2-Ethylhexyl) phthalate was detected in all the associated method blanks. Phenol and Din-butylphthalate was also detected in one of the method blanks. Phenol, di-ethylphthalate, and bis(2-Ethylhexyl)phthalate were detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects for the common phthalate contaminants were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks or equipment rinseates. Sample detects for other contaminants were qualified "B" if the detected concentration was less than 5 times the concentration detected in any of the associated blanks or equipment rinseates. Detects were not qualified "B", if the sample concentration was greater than 10x the concentration of the common laboratory contaminants or 5 times the concentration of the other contaminants detected in any of the associated blanks or equipment rinseates. Non-detects were not qualified.

## **Surrogates**

Surrogate recovery criteria was met in all samples.

# Laboratory Control Sample

The laboratory control sample met all accuracy criteria.

### Internal Standards

All internal standards were within QC limits.

Phelps Collins Alpena, MI Semi-Volatile Organic Date Validation CLP Sampling Date August 1993

# Samples in SDG # 161

P00B10001 P04D012 P04D016 P08B20203 P08B40002	P00B10203 P04D13 P04D018 P08B20910 P08B41214	P00B10910 P04D014 P04D115 P08B30102	P04D011 P04D015 P08B20102 P08B30911
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## **Overview**

Eighteen soil samples for SDG# 161 were validated for semi-volatile organic compounds analyzed using CLP methodology.

## **Summary**

All samples were successfully analyzed for target compounds. No sample contained target compounds above the Contact Required Quantitation Limit (CRQL). No sample contained target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

### **Major Problems**

None

#### **Minor Problems**

### **Holding Times**

All samples were extracted and analyzed within recommended holding times.

## **GC/MS Tune**

No compound failed precision criteria, RSD <30%, during initial calibration. Several compounds failed precision criteria, %D <25%, during continuing calibrations. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

#### <u>Blanks</u>

No target compounds were detected in the associated method blanks. Di-n-butyl-phthalate, bis-(2-Ethylhexyl)phthalate, phenol, and Diethylphthalate were detected in the associated field blanks and/or equipment rinseates. Non-detects were not qualified.

#### Surrogates

One surrogate, 2-fluorobiphenly, failed to met recovery criteria for P08B20910. Since only one surrogate was out of control limits no qualifiers were added.

## Matrix Spike/Matrix Spike Duplicate

Sample P04D015 was used for the matrix spike/matrix spike duplicate. Three of the twenty-two spike compounds were out of control limits for spike recovery. One of the eleven compounds was outside control limits for ,RPD, relative percent difference. The samples were not qualified based on matrix spike/matrix spike duplicate data.

#### Internal Standards

No problems were associated with the internal standards.

Phelps Collins Alpena, MI Semi-Volatile Organic Date Validation CLP Sampling Date July 1993

# Samples in SDG # 2

P04W003	P04W004
P04W007	P04W008
PB-ER3	PBER4
	P04W007

#### **Overview**

Thirteen water samples for SDG# 2 were validated for semi-volatile organic compounds analyzed using LCBNA 10/92 methodology.

#### **Summary**

All samples were successfully analyzed for target compounds. Three samples, P04W001, PB-ER1, and PB-ER3 contained bis(2-Ethylhexyl)phthalate above the Contact Required Quantitation Limit (CRQL). Several samples contained target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

#### **Major Problems**

None

#### Minor Problems

## **Holding Times**

Sample PB-ER1 was extracted one day out of required holding time and analyzed within holding required holding time. Non-detects, in samples analyzed out of holding times, were qualified "UJ" and detects were qualified "J" for estimated. All other samples were extracted and analyzed within recommended holding times.

### **GC/MS Tune**

Several compounds failed precision criteria (RSD <30%, %D <25%) during initial and continuing calibrations. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

## <u>Blanks</u>

Two associated method blanks contained bis(2-Ethylhexyl)phthalate. No contaminants were detected in the associated field blank or equipment rinseate. Detects for the common phthalate contaminants were qualified "B", if the concentration detected was less than 10 times the concentration detected in the associated blanks or equipment rinseates. Detects were not qualified if the sample concentration was greater than 10x the concentration found in the associated blanks or equipment rinseate. Non-detects were not qualified.

## **Surrogates**

All surrogates met recovery criteria.

#### Laboratory Control Sample

4-Chloroaniline exceeded quality control limits in the laboratory control sample. Data was not qualified based on the laboratory control sample.

## Internal Standards

No problems were associated with the internal standards.

Phelps Collins Alpena, MI Semi-Volatile Organic Date Validation CLP Sampling Date August 1993

# Samples in SDG # 209

P00GPW1	POOGPW2	P00GPW3	P02GMW1
P02GMW9	PO4GMW2	P04GMW3	P04GMW4
P06GMW1	PO6GMW2	P2MW3GW4	P2MW9GW4
P3MW1GW4	P5MW3GW4	P8MW1GW4	PB-ER5
PBER08	PBER9	PFB3	PFB6

## **Overview**

Twenty water samples for SDG# 209 were validated for semi-volatile organic compounds analyzed using LCBNA 10/92 methodology.

### Summary

All samples were successfully analyzed for target compounds. Sample, PBER5, contained bis(2-Ethylhexyl)phthalate above the Contact Required Quantitation Limit (CRQL). Several samples contained target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

## Major Problems

None

# Minor Problems

### **Holding Times**

All samples were extracted and analyzed within recommended holding times. Sample PFB3 was re-extracted out of holding times and reanalyzed within holding times. Based on professional judgement qualifiers were not added

# GC/MS Tune

No compound failed precision criteria (RSD <30%, %D <25%) during initial and continuing calibration. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

#### **Blanks**

Bis(2-Ethylhexyl)phthalate was detected in two of the method blanks. One blank also contained phenol. Di-n-butylphthalate, bis-(2-Ethylhexyl)phthalate, benzo(a)anthracene,and chrysene were detected in one or more of the associated field blanks and/or equipment rinseate. Sample detects for the common phthalate contaminants were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks or equipment rinseates. Sample detects for other contaminants were qualified "B" if the detected concentration was less than 5 times the concentration detected in any of the associated blanks or equipment rinseates. Detects were not qualified "B", if the sample concentration was greater than 10x the concentration of the common laboratory contaminants or 5 times the concentration of the other contaminants detected in any of the associated blanks or equipment rinseates. Non-detects were not qualified.

# Surrogates

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Three acid surrogates; D5-phenol, 2-fluorophenol, and 2,4,6-tribromophenol, were outside recovery criteria for samples, PFB3 and PFB3RE. Detects for target compounds associated with these surrogates were qualified "L", non-detects were qualified "UL". All other surrogates meet recovery criteria.

#### Laboratory Control Sample

The laboratory control sample met all recovery criteria.

### **Internal Standards**

No problems were associated with the internal standards.

Phelps Collins Alpena, MI Semi-Volatile Organic Date Validation CLP Sampling Date July 1993

# Samples in SDG # 28

P04D001	P04D001A	P04D002A	P04D002B
P04D003	P04D004A	P04D004B	P04D005A
P04D005B	P04D006A	P04D006B	P04D007
P04D008	P04D009A	P04D009B	P04D010A
P04D010B	P04D017	P04D104B	P04D106B

# **Overview**

Twenty soil samples for SDG# 28 were validated for semi-volatile organic compounds analyzed using CLP methodology.

#### **Summary**

All samples were successfully analyzed for target compounds. No samples contained target compounds above the Contact Required Quantitation Limit (CRQL). Several samples contained target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

# Major Problems

None

## **Minor Problems**

## **Holding Times**

All samples were extracted and analyzed within recommended holding times.

# **GC/MS Tune**

No compound failed precision criteria, RSD <30%, during initial calibration. Several compounds failed precision criteria, %D <25%, during continuing calibrations. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

#### Blanks

One method blank contained bis(2-Ethylhexyl) phthalate. Di-n-butyl phthalate, bis(2-Ethylhexyl) phthalate, phenol, and/or diethylphthalate were detected one or more of the associated field blanks and/or equipment rinseates. Sample detects for the common phthalate contaminants were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks or equipment rinseates. Sample detects for other contaminants were qualified "B" if the detected concentration was less than 5 times the concentration detected in any of the associated blanks or equipment rinseates. Detects were not qualified "B", if the sample concentration was greater than 10x the concentration of the common laboratory contaminants or 5 times the concentration of the other contaminants detected in any of the associated blanks or equipment rinseates. Nondetects were not qualified.

#### <u>Surrogates</u>

All surrogates met recovery criteria.

# Matrix Spike/Matrix Spike Duplicate

Sample P04D004B was used for the matrix spike/matrix spike duplicate. Phenol was out of control limits in the matrix spike for spike recovery. No compound was outside control limits for ,RPD, relative percent difference. The samples were not qualified based on matrix spike/matrix spike duplicate data.

## Internal Standards

No problems were associated with the internal standards.

Pheips Collins Alpena, Mi Semi-Volatile Organic Date Validation CLP Sampling Date August 1993

# Samples in SDG # 447

P08B71213 P08B60002 P02B70506 P02B	0B20203 2B60506 3B80102
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#### **Overview**

Nineteen soil samples for SDG# 447 were validated for semi-volatile organic compounds analyzed using CLP methodology.

## Summary

All samples were successfully analyzed for target compounds. Three samples; P02B60002, P08B80102, and P6D2, were outside control limits for the sixth internal standard and were reanalyzed within holding times. No samples contained target compounds above the Contact Required Quantitation Limit (CRQL). Several samples contained various target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

#### Major Problems

None

### Minor Problems

# **Holding Times**

All samples were extracted and analyzed within recommended holding times.

### **GC/MS Tune**

No compounds failed precision criteria, RSD <30%, during initial calibration. Several compounds failed precision criteria, %D <25%, during continuing calibrations. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

#### **Blanks**

No target compounds were detected in the associated method blanks. Phenol, diethylphthalate, phenanthrene, carbazole, and bis(2-Ethylhexyl)phthalate were detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects for the common phthalate contaminants were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks or equipment rinseates. Sample detects for other contaminants were qualified "B" if the detected concentration was less than 5 times the concentration detected in any of the associated blanks or equipment rinseates. Detects were not qualified "B", if the sample concentration was greater than 10x the concentration of the common laboratory contaminants or 5 times the concentration of the other contaminants detected in any of the associated blanks or equipment rinseates. Non-detects were not qualified.

#### **Surrogates**

One acid surrogate, 2,4,6-tribromophenol, failed to meet recovery criteria for P08B00102 and P08B00102RE. Since only one surrogate was out of control limits qualifiers were not added.

#### Matrix Spike/Matrix Spike Duplicate

Sample P02B40304 was used for the matrix spike/matrix spike duplicate. None of the spike compounds were out of control limits for spike recovery. Five of the eleven compounds were outside control limits for ,RPD, relative percent difference. The samples were not qualified based on matrix spike/matrix spike duplicate data.

#### Internal Standards

The sixth internal standard, D-12 perylene failed control criteria for samples P02B60002, P08B80102, P6D, and their reanalysis. The target compounds associated with the sixth internal standard was qualified "UJ" for non detects and "J" for detects.

Phelps Collins Alpena, MI Semi-Volatile Organic Date Validation CLP Sampling Date August 1993

# Samples in SDG # 523

P2MW2GW4 P5MW1GW4 P2MW4GW4

PBER07

P4MW1GW4

PBER10

P4MW8GW4 PBER11

PBER12

## **Overview**

Nine water samples for SDG# 523 were validated for semi-volatile organic compounds analyzed using LCBNA 10/92 methodology.

#### Summary

All samples were successfully analyzed for target compounds. No sample contained target compounds above the Contact Required Quantitation Limit (CRQL). Several samples contained target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

# **Major Problems**

None

# Minor Problems

# **Holding Times**

All samples were extracted and analyzed within recommended holding times.

### **GC/MS Tune**

Several compounds failed precision criteria (RSD <30%, %D <25%) during initial and continuing calibrations. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

#### **Blanks**

One of the associated method blanks contained bis(2-Ethylhexyl)phthalate. No target analytes were detected in any of the associated field blanks or equipment rinseates. Sample detects for the common phthalate contaminants were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks or equipment rinseates. Sample detects for other contaminants were qualified "B" if the detected concentration was less than 5 times the concentration detected in any of the associated blanks or equipment rinseates. Detects were not qualified "B", if the sample concentration was greater than 10x the concentration of the common laboratory contaminants or 5 times the concentration of the other contaminants detected in any of the associated blanks or equipment rinseates. Non-detects were not qualified.

### Surrogates

All surrogates met recovery criteria.

# **Laboratory Control Sample**

The laboratory control sample met all recovery criteria.

#### **Internal Standards**

No problems were associated with the internal standards.

Phelps Collins Alpena, MI Semi-Volatile Organic Date Validation CLP Sampling Date August 1993

# Samples in SDG # 606

P02B20002 P02B20405	P02B30002	P02B30405
P02B30507 P02B40002	P02B40405	P02B50002
P02B50405 P1B100002	P1B100304	P1B110002
P1B110304 P1B120002	P1B130002	P1B130304
P1B20002 P6D1	P6D3	P6D4

### **Overview**

Twenty soil samples for SDG# 606 were validated for semi-volatile organic compounds analyzed using CLP methodology.

#### **Summary**

All samples were successfully analyzed for target compounds. Sample, P6D4, contained target compounds above the Contact Required Quantitation Limit (CRQL). Several samples contained target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

# Major Problems

None

## Minor Problems

# **Holding Times**

All samples were extracted and analyzed within recommended holding times.

## **GC/MS Tune**

No compound failed the precision criteria, RSD <30% during initial calibration. Several compounds failed precision criteria, %D <25%, during continuing calibration. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

#### **Blanks**

No target compounds were detected in the associated method blanks. Bis(2-Ethylhexyl)phthalate, phenol, diethylphthalate, phenanthrene, and carbazole were detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects for the common phthalate contaminants were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks or equipment rinseates. Sample detects for other contaminants were qualified "B" if the detected concentration was less than 5 times the concentration detected in any of the associated blanks or equipment rinseates. Detects were not qualified "B", if the sample concentration was greater than 10x the concentration of the common laboratory contaminants or 5 times the concentration of the other contaminants detected in any of the associated blanks or equipment rinseates. Non-detects were not qualified.

#### **Surrogates**

All surrogates met recovery criteria.

#### Matrix Spike/Matrix Spike Duplicate

Four of the twenty-two spike recoveries failed high for the matrix spike/matrix spoke duplicate. All of the relative percent differences were within control limits. The data was not qualified based on the matrix spike/matrix spike duplicate data.

#### **Internal Standards**

No problems were associated with the internal standards.

Phelps Collins Alpena, MI Semi-Volatile Organic Date Validation CLP Sampling Date August 1993

# Samples in SDG # 674

P03MW2GW4 P05PW3GW4 P6MW3GW4 P9MW5GW4 PER15	P03MW3GW4 P05MW4GW4 P9MW1GW4 PBER-16 PFB05	PO3MW4GW4 P3MW5GW4 P9MW2GW4 PBER-13 PFB4	P05MW2GW4 P3MW9GW4 P9MW3GW4 PER14
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# **Overview**

Nineteen water samples for SDG# 674 were validated for semi-volatile organic compounds analyzed using LCBNA 10/92 methodology.

#### Summary

All samples were successfully analyzed for target compounds. Several samples contained target compounds above the Contact Required Quantitation Limit (CRQL). Several samples contained target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

## **Major Problems**

None

### Minor Problems

### **Holding Times**

All samples were extracted and analyzed within recommended holding times. Sample PBER16 was re-extracted out of holding time and reanalyzed within holding times. Based on professional judgement qualifiers were not added.

## **GC/MS Tune**

No compound failed precision criteria (RSD <30%, %D <25%) during initial and continuing calibration. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

#### **Blanks**

Several target compounds were detected in the method blanks. bis (2-Ethylhexyl)phthalate was detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects for the common phthalate contaminants were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks or equipment rinseates. Sample detects for other contaminants were qualified "B" if the detected concentration was less than 5 times the concentration detected in any of the associated blanks or equipment rinseates. Detects were not qualified "B", if the sample concentration was greater than 10x the concentration of the common laboratory contaminants or 5 times the concentration of the other contaminants detected in any of the associated blanks or equipment rinseates. Non-detects were not qualified.

#### **Surrogates**

Six surrogates; D5-nitrobenzene, 2-fluorobiphenyl, terphenyl, D5-phenol, 2-fluorophenol and 2,4,6-tribromophenol, were outside recovery criteria for sample P9MW5GW4. Recovery was less than 10% for all surrogates and all non-detects were qualified "R", all detects were qualified "L". Four surrogates; ,D5-nitrobenzene, 2-fluorobiphenyl, terphenyl, and 2,4,6-tribromophenol were outside recovery limits for sample PBER-16. All recoveries were low but greater than 10%, all associated non-detects were qualified "UL" and all detects qualified "L". Two surrogates; D5-phenol and 2-fluorophenol, were outside recovery criteria for PFB4 and PFB4RE. Recovery for D5-phenol was 0% recovery for 2-fluorophenol was low but greater than 10%. Non-detects for associated target compounds were qualified "R" detects were qualified "L". All other surrogates met recovery criteria.

### **Laboratory Control Sample**

The laboratory control sample met all recovery criteria.

#### Internal Standards

No problems were associated with the internal standards.

Phelps Collins Alpena, MI Semi-Volatile Organic Date Validation CLP Sampling Date July 1993

# Samples in SDG # 708

P01B40001	P01B40203	P01B50002	P01B50304
P01B60002	P01B60304	P01B70002	P01B70304
P01B80002	P01B80304	P01B90002	P01B90304
P3B110002	P3B111012	P3B120002	P3B120810
P3B121012	P3B130002	P3B130204	P3B131012

### **Overview**

Twenty soil samples for SDG# 708 were validated for semi-volatile organic compounds analyzed using CLP methodology.

#### **Summary**

All samples were successfully analyzed for target compounds. Sample P3B120810, contained eight target compounds above the Contact Required Quantitation Limit (CRQL). Several samples contained target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

# **Major Problems**

None

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# Minor Problems

# **Holding Times**

All samples were extracted and analyzed within recommended holding times.

### **GC/MS Tune**

No compound failed precision criteria, RSD <30%, during initial calibration. Several compounds failed precision criteria, %D <25%, during continuing calibrations. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

#### <u>Blanks</u>

No target compounds were detected in the associated method blanks. Phenol was detected in one or more of the associated field blanks and/or equipment rinseate. Sample detects for phenol were qualified "B" if the detected concentration was less than 5 times the concentration detected in any of the associated blanks or equipment rinseates. Detects for phenol were not qualified "B", if the sample concentration was greater than 5 times the concentration detected in any of the associated blanks or equipment rinseates. Non-detects were not qualified.

## **Surrogates**

One surrogate, terphenyl-d14, was outside recovery criteria for two samples, P3B110002 and P3B121012. Qualifiers were not added since only one surrogate was outside control limits. All other surrogates met recovery criteria.

## Matrix Spike/Matrix Spike Duplicate

Sample P3B120810 was used for the matrix spike/matrix spike duplicate. Pyrene was outside control limits in both the matrix spike and matrix spike duplicate. No compound was outside control limits for ,RPD, relative percent difference. The samples were not qualified based on matrix spike/matrix spike duplicate data.

#### Internal Standards

No problems were associated with the internal standards.

Phelps Collins Alpena, MI Semi-Volatile Organic Date Validation CLP Sampling Date August 1993

Samples in SDG # 912

P3B110406 P3B120406 P3B130406 P3B200002

## Overview

Four soil samples for SDG# 912 were validated for semi-volatile organic compounds analyzed using CLP methodology.

# Summary

All samples were successfully analyzed for target compounds. Sample P3B200002 contained several target compounds above the Contact Required Quantitation Limit (CRQL). Sample P3B200002 contained target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

# Major Problems

None

# Minor Problems

### **Holding Times**

All samples were extracted and analyzed within recommended holding times.

# **GC/MS Tune**

#### Calibration Criteria

Several compounds were saturated during initial calibration. None of these compounds were detected in the associated sample and no qualifiers were added. Several compounds failed precision criteria (RSD <30%, %d <25%) during initial and continuing calibrations. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

#### **Blanks**

One of the associated method blanks contained Di-n-Butylphthalate. Phenol was detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects for the common phthalate contaminants were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks or equipment rinseates. Sample detects for other contaminants were qualified "B" if the detected concentration was less than 5 times the concentration detected in any of the associated blanks or equipment rinseates. Detects were not qualified "B", if the sample concentration was greater than 10x the concentration of the common laboratory contaminants or 5 times the concentration of the other contaminants detected in any of the associated blanks or equipment rinseates. Non-detects were not qualified.

#### **Surrogates**

All surrogate met recovery criteria.

#### Matrix Spike/Matrix Spike Duplicate

Sample P3B110406 was used for the matrix spike/matrix spike duplicate. All spike recoveries (SR) and relative percent differences (RPD) were within quality control limits for the matrix spike/matrix spike duplicate.

#### Internal Standards

No problems were associated with the internal standards.

No other problems were noted during the data validation.

Phelps Collins Alpena, MI Semi-Volatile Organic Date Validation CLP Sampling Date September 1993

## Samples in SDG # 992

P1MW2GW4	P1MW3GW4	P1MW4GW4	P2MW6GW4
P2MW7GW4	P3MW6GW4	P3MW7GW4	P5MW8GW4
P5MW9GW4	P6MW8GW4	P6MW9GW4	P7MW4GW4
P9MW4GW4	PER18	PER19	PFB07

#### **Overview**

Sixteen water samples for SDG# 992 were validated for semi-volatile organic compounds analyzed using LCBNA 10/92 methodology.

#### **Summary**

All samples were successfully analyzed for target compounds. No sample contained target compounds above the Contact Required Quantitation Limit (CRQL). Several samples contained target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

## **Major Problems**

None

## **Minor Problems**

#### **Holding Times**

All samples were extracted and analyzed within recommended holding times.

#### **GC/MS Tune**

No problems were associated with the GC/MS instrument performance check.

#### Calibration Criteria

Several compounds failed precision criteria (RSD <30%, %D <25%) during initial and continuing calibrations. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

#### Blanks

All associated method blanks contained bis(2-Ethylhexyl)phthalate, one method blank also contained Di-n-butylphthalate. Phenol and di-ethyl phthalate were detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects for the common phthalate contaminants were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks or equipment rinseates. Sample detects for other contaminants were qualified "B" if the detected concentration was less than 5 times the concentration detected in any of the associated blanks or equipment rinseates. Detects were not qualified "B", if the sample concentration was greater than 10x the concentration of the common laboratory contaminants or 5 times the concentration of the other contaminants detected in any of the associated blanks or equipment rinseates. Non-detects were not qualified.

## **Surrogates**

All surrogates met recovery criteria.

#### Laboratory Control Sample

The laboratory control sample meet all recovery criteria. Bis (2-Ethylhexyl)phthalate was outside control limits, but is not a spike compound therefore no corrective action was taken.

## Internal Standards

No problems were associated with the internal standards.

No other problems were noted during the data validation.

Inorganic Compound Data Validation

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APPENDIX L:

Analytical Results; Site 5 Soils Data (collected 1991 and 1993) and RI

**Laboratory Data** 

Site 5 Soils Data (collected 1991 and 1993)

SUMMARY OF 1991 SOIL SAMPLING RESULTS - SITE 5
MIANG, CRTC, PHELPS COLLINS AIRPORT
ALPENA, MICHIGAN

\*

	MOST	TVSCAMETS	SIRINGENI	STATE	ARAR			100 ug/kg	20000 18/18	1.2e5 vg/kg	6 ug/kg	40 ug/kg		Local Background	Local Background	40 mg/kg		Local Background		20 mg/kg	Local Background	Local Background*		Local Background	Local Background		0.8 mg/kg	0.8 mg/kg	3000 mg/kg	Local Background		20 mg/kg or bkgrd	100 mg/kg
	SBS)						OL Units	3.1 ug/kg	360 ug/kg	360 ug/kg	870 us/kg		,	mphe	0.52 mg/kg	mg/kg	me/kg	DV.	THE VE	mg/kg	#E/KE	mgAg	m Mg	m¢yt	me/kg	me/kg	0.31 mg/kg	9.63 mg/tg	Ty/Im	0.21 mg/kg	mg/kg	#W	25 mg/tg
	(dup of SBS)		_	inches	in Labe	9055-96	Result Qual DL	23 B	i)	<b>8</b>	0	n 0		9	n 0	2	<b>-</b>	~	=	×	8	6:	657	•	=	Ξ	o 0	n 0	8 F	0	Ξ	1.8	<b>D</b>
r.srs	SB6	100	130°81	0 inches-6 inches	CompuChem Labs	PC-SF5-SB6-SS06	Resul	7		1200				2450		[6.2]	1320	3.2	19.0J	[2.3]	2020	_	3	17.9	[2.1]	EE!			[42.7]		T.F.	•	
	S	•					Units	3.1 ug/kg	340 ug/kg		820 ug/kg			¥y\$ш	0.52 mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	3½/3m	mg/kg	¥y2m	76 mg/kg	0.31 mg/kg	0.62 mg/kg	mg/kg	0.21 mg/kg	Tylu H	a¢∕kg	25 mg/kg
	(dup of SB5)			iles S	ą	348-54	pasi DL	3.	ج د	⊼ ⊃	82	* * *			U 0.5		_			¥						, =	O 0	0	<b>8</b>	U 0.		_	Þ
200	SB6	i	18-OCT-91	48 inches-54 inches	CompuChem Labs	PC-SF5-SB6-SS48-54	Result Qual DL	₹	•	•	0	•		1050	0	[3.5]	[183]	2.7	10.66	[I.7]	1490	0.88	(ccc)	10.9	[2.2]	0	0	•	[41.6]		[2.9]	2.8	•
,							Units	3.1 ug/kg	340 vg/kg	ne/ke	R20 ue/ke		e A	mg/kg	0.53 mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	meAg	mgAg	meAs	ar/e	TV <sup>4</sup> m	#Wa	0.32 mg/kg			0.21 mg/kg	mg/kg	TyJu	25 mg/kg
				ches	şq	548-54	Jo lead		۳ ت	-	=	,	1		O D		_										ם	5	<u></u>	, -		-	=
FC-SE3	SHS	Cac	18-OCT-91	48 inches-54 inches	CompuChem Labs	PC-SF5-SB5-SS48-54	Result Qual DL	23	0	5		. 4	}	1810	•	Ξ	[K2]	2.9	[1.2]	E.1	1810	1.2	(379)	12.8	[2.2]	197.4		•	[43.5]	•	[3.9]	11.7	0
							Units		ne fre					me/ke	meAe	me/ke	me/ke	T V	me/ke	me/ke	meAe	meAe	me/kg	Tre/Ke	me/ke	II.3 me/kg					_	₽¥%E	25 mg/kg
					į	8	10	3.1	5	5	3	} <u> </u>	٠ •							×	!						11 0.33	290 11	i a	0.02		_	 
PC-SF5	ğ	SBS	18-DCT-91	O inches-6 inches	Committee	PC.SFS.SBS.SS06	Recult Out DL	23	c		-		•	4620	166.01	16.01	153	12	10,721	- F	960		11.71	71	F 1	•			16 97		7.9	<b>Ş</b>	•
Site:		Locator:	Collect Date:	4		Contract Number		Methylene Chloride	4.1	ury increase in the second	Dictivit Physiate	Pentachior ophenol	bis(2-Ethylhexyl)phthalate			2		Arctural Arc		,	Oppor	£ 1			Market	Potential	Total Street	SCHOOL	Silver	Sodner	- Carredina	Zinc	Total Petroleum Hydrocarbons

Only those analyses which were positively detected in one or more samples are shown

- Currently under Review
Key to Qualifers:

B - Blank Contamination
U- Non Detect
J-Result estimated

I)- Result between Contract Required Detection Limit and Instrument Detection Limit U1-Quantitation Limit Estimated UL-Quantitation Limit Bissed Low R-Quantitation Limit Unreliable

SUMMARY OF 1991 SOIL SAMPLING RESULTS - SITE 5 MIANG, CRTC, PHELPS COLLINS AIRPORT

<b>ū</b> ,	18-OCT-91 48 inches-54 inches CompuChem Labs	18-0CT-01
<b>a</b> ,	48 inches-54 inches CompuChem Labs	
,	CompuChem Labs	48 inches-54 inches
8-54	PC-SF5-SB4-SS48-54	CompuChem Labs CompuChem Labs PC.SF3-SB1-SS48-54 PC.SF3-SB4-SS48-54
al DL Units	Result Qual DL Units	
1 3.1 ug/kg		B 3.1
J 340 ug/kg		
	0 340 C	ug/hg 0 U 340
_	U 830	0 U 930 ug/kg 0 U 830
3 340 ug/kg		370
mg/kg	3y3m 0101	
0.52	UL 0.52	UL 0.54 mg/kg 0 UL 0.52
0.1 mg/kg	0.1	0.1 mg/kg [3.7] 0.1
	-	J mg/kg [189] J
J 0.4 mg/kg U 0.51 mg/kg		0.51
0.6 mg/kg		0.6 mg/kg 4 0.6
mg/kg	1440 mg/kg	1440
	0.2	mg/kg 0.81 0.2
	3.5	mg/kg [367] 3.5
0.1 mg/kg		тg/kg 12.3 0.1
0.8 mg/kg		4.7 0.8
	E	73 mg/kg [166] 73
L 0.3 mg/kg		L 0.3
U 0.61 mg/kg		0 O 0.61
B mg/kg	[56.8] B mg/kg	[56.8] B
1 0.2 mg/kg		U 0.22 mg/kg 3.9 I 0.2
0.6 mg/kg	9.0	9.0
mg/kg	5.6 mg/kg	_
	O BDI. 25 me/ke	

Only those analyses which were positively detected in one or more samples are shown  $\bullet$  . Currently under Review

Key to Qualifiers:

B - Blank Contamination U- Non Detect J-Result estimated

I)- Result between Contract Required Detection Limit and Instrument Detection Limit UJ-Quantitation Limit Estimated UL-Quantitation Limit Biased Low R-Quantitation Limit Unreliable

SUMMARY OF 1991 SOIL SAMPLING RESULTS - SITE 5
MIANG, CRTC, PHELPS COLLINS AIRPORT
ALPENA, MICHIGAN

Ę Z.

PC.CES		PC-SF5	r.sp		MOST
		SB1	SB2	700	STRINGENT
186		19 T-01	17-OCT-91		CTATE
17-OCT-91			48 inches-54 inches	0 inches-6 inches	
0 inches 6 inches	eles Per	48 INCIDES-24 INCIDES	Spendiem Labe	CompuChem Labs	VXVX
CompuChem Labs	Labe	Compuchem Labs	DC CES. CR7. CC48.54	PC-SF5-SB2-SS06	
PC-SF5-SB1-SS06		ı	party Ord Of This	Result Qual DL Units	
Result	Qual DL. Units	- DC	-	39 B 3.1 ug/kg	3y3n 001
5	R 3.1 ue/te	9.6 B 3.1 ug/kg	31 8 3.1 08/48		
3					20000 ne/ke
		0 11 390 ue/kg	110 BJ 350 ug/kg	_	1 3-5 metho
120			0 U 350 ug/kg		7
•	U 380 ug/kg	2	5	0 U 850 mg/kg	Turan o
•	11 910 ug/kg	130 ng/kg	3	syst USL 18 V7	10 mg/kg
		110 B ug/kg	D O D DOOR	}	
bis(2-Ethylhexyl)phthalate					
			Me/kg	2590 mg/kg	Local Background
3180	Jy/Ju		250	1.6 mg/4	Local Background
	me/kg	0 U 0.54 mg/kg	K		40 mg/kg
<u>:</u>		11.7 tl	16.1] mg/kg		
(12.7)	-	•	_		
219	3y/dm	-		2.8 mg/kg	Local Background
<b>=</b>	Tydu	_			
7.5		(0.83) mg/kg	10.951	•	20 mg/g
	,	II.81 K mg/kg	3.2 K	4	I neal Backersund
<b>≚</b>	<b>4</b>	•		2360 mg/rg	
857		-	=	5.9 mg/kg	Local Background
52.	S mg/kg	11.5 mg/kg	:	Th/Sus QL68	-
55		[469] mg/kg	[481]		Local Background
; ;		14.2 mg/kg	- 18.4 - 18.4		I mal Backerment
77.			12.61 mg/kg		
[2.7]				[268] mg/4	
	T MEYE		100 11 0 11	0 U 0.32 mg/kg	0.8 mg/tg
	0 U 0.31 mg/kg		300 D	0 11 0.64 mg/kg	0.8 mg/tg
•	i i me/ke	0 UJ 0.65 mg/kg	0 00 0.04	•	3000 mg/tg
	• 1	157.41 B ms/ks	47.4] B mg/kg	;	Paratrasan
[52]		: :	0 U 0.21 mg/kg	0 U 0.21 mg/rg	TOTAL DESCRIPTION
	0 U 0.21 mg/kg	77.0	,	5.4 mg/kg	
2	T. The first	13.71 mg/lg	[C-#]	en/em	20 me/kg or bkgrd
		23.9 J mg/kg	1.6 J mg/kg	•	
4	13.9 J mg/kg	•			
			20 Act	0 U 25 mg/kg	100 mg/tg
		3/ ms/(c	8		

Only those analytes which were positively detected in one or more samples are shown

• Currently under Review
Key budyalifers:

B. Blank Consumination

1). Non Detect

J. Result estimated

||- Result between Contract Required Detection Limit and Instrument Detection Limit UJ. Quantitation Limit Estimated
UL. Quantitation Limit Bissed Low
R. Quantitation Limit Uncliable

	Sample Number:	P05B6010 3	P05B6040 7	P05B7010 . 3	P05B7040 7	MDNR Cleanup Level
	Date:	1/21/93	1/21/93	1/21/93	1/21/93	
	Depth:	1′- 3′	4'- 7'	1′- 3′	4'- 7'	
	SVOCs: CLP 3/90 (ppb)					
	Butylbenzylphthalate	460 B	280 B	360 B		20,000
	bis(2-ethylhexyl)phthalate	130	66	400	270	40
.	2-methylnapthalene					200
	Lead (ppm)	6.0	8.6	54.1	13.9	7.0
اً ،	TPH 418.1 (ppm)	211	*	2680	2820	100

Notes:

Blank spaces indicate compound not detected above CRQL.

Sample Number:	P05B8010 3 (1)	P05B8020 4 (1)	P05B8040 7	P05B9010 3	MDNR Cleanup Level
Date:	1/21/93	1/21/93	1/21/93	1/21/93	
Depth:	1′- 3′	2'- 4'	4'- 7'	1'- 3'	
SVOCs: CLP 3/90 (ppb)		,			
Butylbenzylphthalate	250 B	300 B	390 B	430 B	20,000
bis(2-ethylhexyl)phthalate					40
2-methylnapthalene			56		200
Lead (ppm)	4.4	2.6	2.6	2.9	7.0
TPH 418.1 (ppm)	122	33	47.9	123	100

#### Notes:

Blank space indicates compound not detected above CRQL.

(1) Field duplicate pair

B - Blank contamination

Sample Number:	P05B9040 7	P5B10010 3 <sup>1</sup>	P5B10020	P5B10040 7	MDNR Cleanup Level
Date:	1/21/93	1/21/93	1/21/93	1/21/93	
Depth:	4'- 7'	1′- 3′	2'- 4'	1′- 3′	
SVOCs: CLP 3/90 (ppb)					
Butylbenzylphthalate		290	300 B	85 B	20,000
bis(2-ethylhexyl)phthalate		85	57		40
2-methylnapthalene					200
Lead (ppm)	2.1	11.2	44.6 J	4.8 J	7.0
TPH 418.1 (ppm)	572	104	58.0	38.6	100

#### Notes:

\*

Blank space indicates compound not detected above CRQL

- (1) Field duplicate pair
- B Blank contamination
- J Estimated value

Sample Number:	P5B11010 3	P5B11040 7	P5B12010	P5B12060 9	MDNR Cleanup Level
Date:	1/21/93	1/21/93	1/21/93	1/21/93	
Depth:	1'- 3'	4'- 7'	1'- 4'	6'- 9'	
SVOCs: CLP 3/90 (ppb)					
Butylbenzylphthalate				37	20,000
bis(2-ethylhexyl)phthalate					40
2-methylnapthalene					200
Lead (ppm)	5.1 J	1.3 J	2.2 J	1.1	7.0
TPH 418.1 (ppm)	74.5	121	35.1		100

#### Notes:

Blank space indicates compound not detected above CRQL

J - Estimated value

Sample Number:	P5B13010 4	P5B13061 1	P5B14010 3	P5B14061 2	MDNR Cleanup Level
Date:	1/21/93	1/21/93	1/21/93	1/21/93	
Depth:	1'- 4'	6'- 11'	1'- 3'	6'- 12'	
SVOCs: CLP 3/90 (ppb)					
Butylbenzylphthalate					20,000
bis(2-ethylhexyl)phthalate					40
	<u> </u>				20
2-methylnapthalene	1.1	1.5	1.1	1.1	7.0
Lead (ppm)	1.1	<u> </u>		13.1	100
TPH 418.1 (ppm)				13.1	100

Notes:

Blank space indicates compound not detected above CRQL

RI Laboratory Data

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

	QUAL		<b>:</b>	<b>&gt;</b>	> <b>:</b>	> :	<b>&gt;</b> :	>:	<b>&gt;</b> :	<b>=</b>	=	,	D	כ	ב	n	ם	ם		ם	ב			Þ			ם !	-		n (		2							
ER04 PC-ER04 08/01/93	RESULT C		0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.30	2,5	} .	0.30	0.30	0.20	0.30	0.25	0.20	1	0.40	0.25		•	0.35	•	•	0.85	0.25	0.40	0.50	•	0.35	0.33	0.30	0.30	2			
			Ω	: כ	<b>&gt;</b>	Þ	n	o O	<b>D</b> :	<b>:</b>	<b>-</b> :	>	·. =	) =	· =	<b>=</b>	· =	) =	·	=	· =	•		ח	•		D	Ω	ם	Þ		D	<b>-</b> :	<b>&gt;</b> :	<b>&gt;</b> ;	>			
3 103 193	QUAL		35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	C7:0	. 0			20.00	200	200	3.	90	36.0			3.5	} .		0.85	0.25	0.40	0.50		0.35	0.35	0.50	0.35	0.30			
ER03 PC-ER03 07/31/93	RESULT		0.35	0	ö	0	Ö	Ö	Ö	<b>o</b> (	<b>5</b> (	<b>&gt;</b> '	,	•	, c		,		,																				
05 93	QUAL																																			•			
ER02 PC-ER02 07/29/93	RESULT		•	•	٠	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•													
	QUAL		=	ם כ	=	=	<b>=</b>	=	) D	ם	ב	ם		<b>5</b>	>	ם	כ	ב	ם		D	Þ			•		:	<b>-</b>	<b>:</b>	<b>-</b>	>	Ω	D	ח	n	Ω			
ER01 PC-ER01 07/29/93			35	0.35	040	35.0	25.0	25.0	0.35	0.35	0.30	0.25		0.30	0.30	0.20	0.30	0.25	0.20	•	0.40	0.25	r		0.35	,		0.85	0.23	0.40	0.50	0.35	0.35	0.50	0.35	0.30			
9 7 E	RESULT																								_			_	_	_	_	-		. =	. ~		ì		
	QUAL		:	=	•	<b>:</b>	<b>&gt;</b> :	<b>&gt;</b> :	<b>-</b>	) <b>&gt;</b>	) D	ב		D	n	Ω	ם	D	D		ח	D			ם נ			2 2			<b>)</b>	-		, c					
EB02 PC-EB02 11/12/92	RESULT		,	0.35	0.30	0.40	0.25	0.35	0.35	0.35	0.00	0.25	•	0.30	0.30	0.20	0.30	0.25	0.20	,	0.40	0.25	•	1	0.35	•	•	0.85	0.25	0.40	0.50	٠ ,	35.0	65.0	0.00	0.00			
				<b>:</b>	<b>&gt;</b> '	ח	Þ	ם	D :	<b>-</b> :	<b>.</b>	) <b>)</b>	)	Ω	=	) <b>)</b>	=	ם מ	) <b>=</b>	<b>,</b>	n	) )	ı		ם			ם	ם	D	ח	;	<b>-</b> :	<b>&gt;</b> :	۽ د	a <u>=</u>	•		
)1 B01	OIM	,		0.35	.35	0.40	0.25	0.35	0.35	0.35	0.33	0.30	<u>.</u>	30	0.00	020	0.00	25.0	200	07.0	0 40	25.0	} ; ;		0.35			0.85	0.25	0.40	0.50	1	0.35	0.35	0.50	0.10	0.30		
EB01 PC-EB01	DECILIT			0	0	0	0	0	0		,	_															_			اسع ن	_	<b>e</b>	< :	₹.	<b>≂</b> ৃ	< ?	₹.**		
LOCATOR: AMPLE ID:		CNIIS			l∕gu		√ga √ga	l/gu	l/gn	, ¥.,	/gn	l/gu	ng/I	ug/ı	ug/I	r/gn	ngn	I/an	ng/i	ng/l	8	ng/i	l/gn	ng/l	l/an	1/611	Von	ng/l	Van	ug/l	ug/l						/gn		
LOCATOR: SAMPLE ID:		,																													35.43								
				hane		hane				ue .						hylcne	41	ylene	ropylene	v	,	ether					2110		. 4	iic Lane	21181						thane		
			i de	chloroet	roethan	chloroet	roethan	ethane	ethylene	oropropa	ethane	benzene	ethane	ethylen	opropane	chloroet	openzen	loropro	ichlorop	obenzen	,	ylvinyl	nene	ı,	<u>.</u>	luene	-bentant	6	cente metho	lomomet	HOLOMBE	" sulfide	trachlor	Zene	ane	E	hlorome		
			ROTO	1.1.1.2-Tetrachloroethane	1 1 1-Trichloroethane	1 2 2-Tetrachloroethane	1 2.Trichlorosthane	1-Dichloroethane	1-Dichloroethylene	1,2,3-Trichloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	,2-Dichloroethylene	,2-Dichloropropane	1,2-trans-Dichloroethylene	1,3-Dichlorobenzene	,3-cis-Dichloropropylene	,3-trans-Dichloropropylene	,4-Dichlorobenzene	2-Butanone	2-Chloroethylvinyl ether	2-Chlorotoluene	2-Hexanone	2-Propanone	4-Chlorotoluene	4-Methyi-2-pentanone	Benzene	Bromouciacia	Bromochioromediane	Вготобри	Bromotoriii Carbon Disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Dibromochloromethane		
			SO1	3	_	-	: -	; ;		1,2	1,2	1,2	1,2	-	-:		÷		<u>.</u>		4	4	7	4	Ċί.	4,	4. 1	DO 6	<u>n</u> (	ai e		. ·	·			~	·==::		

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

	QUAL	D	;	<b>&gt;</b>	>			ם		Þ	ם			<b>m</b>	Þ	n		Þ	n		ם	ם	ם	D	<b>&gt;</b>	æ	:	>				>	Þ	ב	D	
ER04 PC-ER04 08/01/93	RESULT	0.40	•	0.45	0.50	0.78	•	0.30		0.30	0.55	•	•	0.00	0.20	0.20		0.50	0.15	•	0.35	0.25	0.20	<b>S</b>	0.25	0.29		n	•	•	•	S	2	vo ·	w.	
	QUAL	Þ	;	<b>&gt;</b>	>			Þ		Þ	ם			<b>D</b>	<b>&gt;</b>	Þ		'n	D		Þ	Þ	ם	ם	Þ	æ	:	>				<b>&gt;</b>	Þ	<b>&gt;</b>	Þ	
ER03 PC-ER03 07/31/93	RESULT	0.40	•	0.45	0.50	0.16	•	0.30		0.30	0.55	•	٠	0.15	0.20	0.20	8	0.50	0.15		0.35	0.25	0.20	<b>~</b> S	0.25	0.13	•	n	•	•	•	<b>∽</b>	2	S	<b>v</b> s	
ER02 PC-ER02 07/29/93	T QUAL	•		•	•			•			•	•		•		•			•	•		•	•	•	•			•		•	•		•	•		
P. C.	RESULT																																			
	QUAL	Þ	;	Þ	>	æ		Þ		ם	D			Þ	ם	n		ם	ם		D	ם	ר	D	ם	D	:	3				5	5	5	5	
ER01 PC-ER01 07/29/93	RESULT	0.40	•	0.45	0.50	0.11	•	0.30		0.30	0.55	•		0.15	0.20	0.20	•	0.50	0.15	•	0.35	0.25	0.20	5	0.25	0.25	•	c		•	•	2	20	\$	×	
	QUAL	Ω	1	D	ם	æ		Þ		n	ם			ם	D	ם		Þ	n		ם	Þ	Þ	ם	ם	ב	:	>				ם	D	D	ם	
EB02 PC-EB02 11/12/92	RESULT	0.40	•	0.45	0.50	2.60		0.30	t	0.30	0.55	•		0.15	0.20	0.20	•	0.50	0.15	•	0.35	0.25	0.20	\$	0.25	0.25	•	n	•	•		\$	20	S.	×	
	QUAL	n	:	Þ	⊃	æ		ם		ם	D			<b>&gt;</b>	n	>		ם	ב		ם	n	D	ם	n	ח	:	>				Þ	ם	Þ	D	
EB01 PC-EB01 11/12/92	RESULT	0.40	• ;	0.45	0.50	2.40		0.30	,	0.30	0.55	,		0.28	0.20	0.33	•	0.50	0.15	٠	0.35	0.25	0.20	\$	0.25	0.25	•	n	•	•		S	70	S	s.	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	Van	l/gu	l∕gu .	√an	/8n	V8n	org Verif	l/gu	l/gu		<b>√8</b> 00		l/gu	<b>18</b> 0	Van	Van		L/gu	1/8n	Én	Van	/an	l/gu	1/an	l/8n			I/an						Ngu .	
		Dibromomethane	Ethylbenzene	Methyl bromide	Methyl chloride	Methylene chloride	Styrene	Tetrachloroethylene	Toluene	Trichloroethylene	Vinyl chloride	Xylenes (TOTAL)	8020	1,2-Dichlorobenzene	1,2-Dimethylbenzene	1,3-Dichlorobenzene	1,3-Dimethylbenzene	1,3/1,4-Dimethylbenzene	1,4-Dichlorobenzene	1,4-Dimethylbenzene	Benzene	Chlorobenzene	Ethylbenzene	Methyl-t-Butyl Ether	Styrene	Toluene	CLP 3/90	1,2,4-1 richiorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2,2'-Oxybis(1-Chloropropane)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

. <b>4</b> . 8	QUAL	=	=	<b>:</b>	>	<b>&gt;</b>	ם		<b>)</b>	>	ב	n	Ξ		<b>)</b>	י כ	<b>D</b>	כ	ם	Ξ		<b>)</b>	Þ	ם	D	ם	=		) <b>:</b>	<b>&gt;</b> :	<b>)</b>		ם	ם	ם		ם	=	:	<b>:</b>	<b>-</b>	D	ב			
ER04 PC-ER04 08/01/93	RESULT	٧	۰ ج	3,	n	<b>~</b>	Ψ.	. •	n ;	20	S.	8	, 00	3	ָה י	•	2	<b>~</b>	<b>v</b> 7		· •	n	<b>~</b>	20	20	•	. •	٠ ٠	n •	יח	ů.	vo ·	<b>S</b>	S	~	•	*		•	י ח	•	~	•			
93	QUAL	=	:	<b>&gt;</b> 1	Þ	ב	=	· :	>	ב	D	ם	=	· :	>	Þ	ם	ם	ם	=	<b>:</b>	D	<b>&gt;</b>	ם	ם	=		<b>&gt;</b> :	<b>&gt;</b> :	<b>-</b>	<b>&gt;</b>	>	ם	D	n		=		0.80	<b>-</b>	<b>-</b>	<b>&gt;</b>				
ER03 PC-ER03 07/31/93	RESULT	٠	. 8	2	S.	<b>~</b>	•	יי	•	20	•	~	, 5	3 '	n	s.	2	<b>~</b>	•	. •	n '	<b>~</b>	Ś	2	20	` <b>'</b>	7 •	י ח	n '	SO.	*	\$	5	S	ν,	•	•	٠ (	oʻ,	n	~	S	7			
33.72	QUAL																																													
ER02 PC-ER02 07/29/93	RESULT		•	•	•	•		•	•	•	•	,	•	•	•	•	٠	•		•	•	٠	'	•			•	•	•	1	٠	•	٠	•	•		•	•	•	1	•		•	•		
3 =	QUAL	į	3	5	5	111	3 :	3	5	ñ	111	3 =	5 :	3	3	Б	n	Ε	3 5	3	5	5	n	S =	3 5	3 :	3	5	5	5	5	n	5	131	3 =	3	i	5	5	n	n	n	Ξ	3		
ER01 PC-ER01 07/29/93	RESULT	,	n	70	S	•	٠,٠	S	5	20	•	) <b>4</b>	c ;	20	S	ς.	20	<b>,</b>		n	<b>.</b>	ν.	*	۰ ک	2 6	9, 1	Ć.	S	S	S	\$	<b>v</b> 1	<b>v</b> ;	. •	, <b>v</b>	n	,	S	S	S	ν,	~		'n		
2.2	QUAL		Þ	ם	ם	- =	<b>&gt;</b> :	>	n	=		<b>:</b>	<b>-</b>	5	n	m	; =	=	3 :	0	Þ	ם	=		?	3	n	ם	ם	ח	ם	2	=	=	•	3		D	Þ	'n	=	=		2		
EB02 PC-EB02 11/12/92	RESULT		S	70	v	, 4	Ċ.	S	ν.	, 5	3	ς,	S	2	ν,	v	, Ç	3	n '	'n	Š	•	. •	٠ (	2 5	20	S	S	S	ς.	<b>•</b>	•	•	v	, v	n	•	•	ν.	<b>S</b>	•		· •	7		
12 21	QUAL		ב	ם	=	:	>	ם	=	=	<b>:</b>	<b>)</b>	D	ם	1	===	3 =	· :	•	ב	n	=		<b>:</b>	<b>)</b>	Þ	ם	ם	n	=	=	· <b>=</b>	=		<b>:</b>	•		<b>-</b>	D	n	; =	=	<b>;</b>	<b>-</b>		
EB01 PC-EB01 11/12/92	RESULT		Š	20	•	•	^	S	•	, 5	ο, '	n	s	70	v	. •	, 5	3 '	n	2	<b>v</b>	. •	, <b>u</b>	n (	22	20	<b>~</b>	ν,	3	•	, •	v	· •	. •	יח	'n	•	S	~	~	. •	٠ ٧	ָה י	\$		
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:		2 4.Dimethylphenol				2,6-Dinitrotoluene	4			phenol	2-Methylnaphthalene ug/l	2-Methylphenol ug/l	Men anilian			enzidine		4-Bromophenyl phenyl ether ug/l	4-Chloro-3-methyl phenol			pnenyi emer	76	4-Nitroaniline ug/l	4-Nitrophenol ug/l					والا	Š	2	3-9	i de la companya de l	Butyl benzyl phthalate ug/l	Carbazole ug/l	Chrysene ug/l	113.00			ninacene		Diethyl phthalate ug/l		

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

LOCATOR: SAMPLE ID: COLLECTION DATE:	EB01 PC-EB01 11/12/92	01	EB02 PC-EB02 11/12/92	20 20	ER01 PC-ER01 07/29/93	93	ER02 PC-ER02 07/29/93	05 33	ER03 PC-ER03 07/31/93	£ £	ER04 PC-ER04 08/01/93	. <b>3</b> . 8
UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Dimethyl phthalate	8	ם	S	D	S	ſ	•		S	n	S	Þ
	5	Ω	S	n	S	m	•		S	ם	8	Þ
	S	Ω	S	Ω	\$	m	•		8	D	80	n
robenzene	ν.	n	\$	5	5	5	•		8	n	S	ם
Hexachlorobutadiene ug/l	s	D	5	ם	\$	n	1		S	D	S.	Ω
Hexachlorocyclopentadiene ug/l	ν.	n	5	n	5	n	(1)		S	D	S	ם
	5	D	5	Ω	5	n	,		S.	Ω	S	D
Indeno(1,2,3-c,d)pyrene ug/l	2	n	5	Ω	S	5	•		ν	ם	<b>S</b>	Þ
	S	D	5	ם	S.	5	•		S .	ה י	vo 1	<b>&gt;</b> :
N-Nitrosodi-N-Propylamine ug/l	\$	n	5	>	S	5	•		<b>S</b>	Þ	vo ·	D :
N-Nitrosodiphenylamine ug/l		Ω	\$	<b>&gt;</b>	\$	5	t		<b>S</b>	<b>D</b>	S.	<b>)</b>
		ם	S	<b>-</b>	s.	5	•		<b>.</b>	<b>-</b>	<b>Y</b>	י כ
Nitrobenzene ug/l		ם	S	n	s.	5	•		S	Þ	•	Þ
Pentachlorophenol ug/l	20	Ω	20	n	20	5	•		20	Þ	20	
Phenanthrene vg/l	5	Ω	S	Ω	s.	n	•		s.	D	S	Þ
Phenol ug/l	\$	D	S	n	S	5	•		4		0.0	0
Pyrene ug/l	5	ם	S	n	S	5	ı		s.	<b>&gt;</b>	S.	•
bis(2-Chloroethoxy)methane ug/l	S	ם	S	Ω	S	ħ	•		\$	<u> </u>	<b>S</b>	n
bis(2-Chloroethyl) ether ug/l	5	Ω	\$	n	5	5	•		v.	Þ	v	<b>&gt;</b>
bis(2-Ethylhexyl)phthalate ug/l	69	B	33	æ	15	-			20		0	æ
METALS												
Antimony ug/l	09	Ω	9	D	35	D	45	n	35	n	35	Ω
Dissolved	•		•		•		•		•		•	
	4	ם	4	<u>*</u>	4	Ω	4	ם	4	Þ	4	n
Arsenic, Dissolved ug/l	•		1		•		•		•		•	
	-	D	gund	Ω	-	ם	4	ם	-	>	-	Þ
Dissolved			•		•	:	٠,	;	• •		• (	:
	\$	D	8	Ω	m	Þ	'n	Þ	m	>		>
Dissolved.			•		•		•	;	• (	;	• (	;
	9	Þ	9	n	∞	Þ	10	•	90	<b>-</b>	æ	>
m, Dissolved			•		•		•		•		•	;
	5	n	S	n	4	n	15	Þ	4.60	<b>9</b> 0	4	<b>&gt;</b>
er, Dissolved		:		5	• •	:		:	٠ ،	:	٠,	=
	7	5	5.50	9	7	>	7	<b>-</b>	7	>	7	>
Lead, Dissolved ug/l	•		•		1		•		•		•	
《注》(1915年2月18日) 2016年 - 1917年 - 1918年												

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

	QUAL	ם	ם	Þ	Ω	ם	Þ		Þ
ER04 PC-ER04 08/01/93	RESULT Q	0.20	81 ,	e '	4	' M' '	<b>.</b>		0.25
	QUAL	Þ	Þ	n	n	Þ	ם		n
ER03 PC-ER03 07/31/93	RESULT	0.20	' ≊ '	· en ·	4	' m	• •	1	0.25
	QUAL	Ω	n	D	n	UL	Ω		
ER02 PC-ER02 07/29/93	RESULT	0.20	35	' ES	. 4	· m	, <i>r</i> v	•	•
	JAAL	Ω	D	OL.	n	n	0		n
ER01 PC-ER01 07/29/93	RESULT QUAL	0.20	- 81	l en	· 4	' m	4.30	1	0.25
	QUAL	n	n	UWN	n	n	<b>9</b> 0		
EB02 PC-EB02 11/12/92	RESULT	0.20	' <b>=</b>	٠ 4	. 9	. 2	5.30	•	•
	QUAL	n	Ω	Ω	n	n	0B		
EB01 PC-EB01 11/12/92	RESULT	0.20	' =	, 4	, 0	- 7	5.30		•
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS	V8n	√gu √gu	√gu √gu	V8n √8n	1/gn 1/gn	l/gu l/gu	l/gn	mg/l
S COLLECT		Mercury	Mercury, Dissolved Nickel	Nickel, Dissolved Selenium	Selenium, Dissolved Silver	Silver, Dissolved Thallium	Thallium, Dissolved Zinc	Zinc, Dissolved	TPH Total Petroleum Hydrocarbons

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

ER11 PC-ER11 08/17/93	RESULT QUAL	•	0.35 U	0 40	36.0	11 55.0	0.35			0.30 U	0.25 U	•	0.30 U	0.30 U			0.25 U	0.20 U		0.40 U		•		•	•	•	•			0.50 U	•	0.35 U	0.35 U	0.50 U	0.21 J	0.30 U
ER10 PC-ER10 08/17/93	RESULT QUAL	•	0.35 U						•	0.30 U	0.25 U			0.30 U			0.25 U	0.20 U		0.40 U	•		•	•	•	•	•	•	0.40 U	0.50 U	•	0.35 U			•	0.30 U
ER09 PC-ER09 08/15/93	RESULT QUAL	11 95 0	0 35 0	_	04:0					0.30 U	0.25 U	ı	0.30 U	0.30 U	0.20 U			0.20 U			0.25 U	•		0.35 U	1	i	0.85 U			0.50 U	•	_		0.50 U	0.35 U	
ER08 PC-ER08 08/15/93	RESULT QUAL	11	0 35 0	0.33	0.40	0 57.0				0.30 U	0.25 U	•	0.30 U	0.30 U		0.30 U	0.25 U	0.20 U		0.40 U	0.25 U	•	í	0.35 U	•	•	0.85 U			0.50 U	•	0.35 U	0.35 U	0.50 U	0.35 U	
ER07 PC-ER07 08/15/93	RESULT QUAL	11 36 0	0.35 0		0.40	0 57.0					0.25 U	1	0.30 U	0.30 U	0.20 U			0.20 U		0.40 U	0.25 U	•	•	0.35 U		•	O.85 U	0.25 U		0.50 U		0.35 U	0.35 U	0.50 U		11 030
ER05 PC-ER05 08/12/93	RESULT QUAL		0.35			0.25	0.35		· •	. 0	0.25 U		0.30 U	0.30 U	0.20 U	0.30 U	0.25 U	0.20 U	•	0.40 U	0.25 U	•		0.35 U	•	•	0.85 U	0.25 U	0.40 U	0.50 U		0.35 U	0.35 U	0.50 U	0.21	0.30
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:				ane			1,1-Dichioroemylene				1,2-Dichloroethylene ug/l		ylene		1,3-cis-Dichloropropylene ug/l		1,4-Dichlorobenzene ug/l	2-Butanone ug/l	2-Chloroethylvinyl ether ug/l	2-Chlorotoluene ug/l	2-Hexanone ug/l	2-Propanone ug/l	4-Chlorotoluene ug/l	4-Methyl-2-pentanone ug/l	Benzene ug/l	Bromobenzene ug/l	Bromochloromethane ug/l	Bromodichloromethane ug/l	Bromoform ug/l	Carbon Disulfide ug/l	ride	Chlorobenzene	Chloroethane ug/l		Controlliane

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

	QUAL		:	>:	<b>-</b>	<b>m</b>	;	<b>&gt;</b>	=	· =	)		ב	:	>		;	Þ		m	<b>&gt;</b>				Δ		ב				n	D	ח	ם			
ER11 PC-ER11 08/17/93	result qu		, ,	0.45	0.50	0.99		0.30	0.0	95.0			0.15		0.20	•	•	0.15	•	0.08	0.25	0.09	٠	1. (	0.39		s.			•	<b>v</b> :	20	w	<b>s</b> s			
	QUAL R		1	<b>&gt;</b> ;	Þ	<b>~</b>	,	D	=	) <b>:</b>	•		æ	;	Þ		•	<b>m</b> .		ם	-	Þ			m		=	)			=	=	· <b>&gt;</b>	D			
ER10 PC-ER10 08/17/93	RESULT (	•	•	0.45	0.50	0.76	•	0.30		0.50	0.33	•	0.40	•	0.20	•	•	0.37	•	0.35	0.0	0.20	•	•	0.12		v	, 1	•		•	, 5	,	•			
	OUAL	D		D	Þ	Þ		n	:	>:	>		æ	Ω	Ω			D		n	ם	n	n	n	æ		=	>			=		=	) <b>=</b>	ı		
ER09 PC-ER09 08/15/93	RESULT Q	0.40	•	0.45	0.50	-	•	0.30	•	0.30	0.55	•	1.40	0.20	0.20	0.04	•	0.15	0.04	0.35	0.25	0.20	S	0.25	0.18		·	o	•	•	' '	n (	3 ~	, •	•		
	QUAL	D		ם	D			Ω	;	<b>D</b> :	D		n	5	n		5	5		n	ם	ā	n	D	_		:	>			:	> :	<b>&gt;</b> =	=	•		
ER08 PC-ER08 08/15/93	RESULT Q	0.40	•	0.45	0.50	0.03		0.30	•	0.30	0.55		0.15	0.20	0.20	•	0.50	0.15		0.35	0.25	0.20	· <b>v</b>	0.25	0.28		٠,	n	•	•	• •	<b>^</b> ;	97 <b>*</b>	n <b>v</b>	7		
	QUAL	ם		Ω	ח	כי		n		>	ם		<b>=</b>	כ	Ω	i	ם	ם מ	)	Ξ	=	) <b>&gt;</b>	· =	ם כ	Ø		;	9				•	o:	<b>&gt;</b> :	>		
ER07 PC-ER07 08/15/93	RESULT Q	0.40	,	0.45	0.50	-		0.30	٠	0.30	0.55	•	0.15	0.20	0.20		0.50	0.15		0 35	25 O	0.20	•	0.25	0.25			v.	•	•	•	<b>ν</b>	, 20	n '	n		
	QUAL	n	,	ם	· =	•		ם		>	Ω		<b>a</b>	==	, <u>c</u>	1	Ξ	) #	2	=	<b>&gt;</b> =	<b>=</b>	) <b>=</b>	<b>=</b>	<u>~</u>	ì		ם				>	<b>)</b>	<b>&gt;</b> :	<b>-</b>		
ER05 PC-ER05 08/12/93	RESULT Q	0 40	?	0.45	9.0	80.0		0.30	٠	0.30	0.55	,	90.00	0.00	70.0	À .	9	0.50	70:0	70	0.35	0.0	07.0	0.25	0.16	•		S	•	•	•	S	20	'n	n		
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	<b>#8</b>		30 6 30 6	20 5	l/an	,	l/an	l/gu	l/gu	/an	U∕an .		Tan .	, g	l go			780 S	l/gu	ngn	I/8n	√an i	l/gu l/wn	Lon	• 9		l/gn	∥8n	/Sa	l/gu	opane) ug/A		l/gu	/8 <b>0</b>		
COD			Dibromomeunane	Ethylbenzene	Methyl bromide	Methyl chloride	Methylene chionae	Styrene Terrachiomethylene	Tolnene	Trichlomethylene	Vinyl chloride	Xylenes (TOTAL)	8020	I,2-Dichlorobenzene	1,2-Dimetnyloenzene	1,3-Dichlorobenzene	1,3-Dimemylocuzene	1,3/1,4-Dimethylbenzene	1,4-Dichlorobenzene	1,4-Dimethylbenzene	Benzene	Chlorobenzene	Ethylbenzene	Methyl-t-Butyl Ether	Styrene	I oluene	CLP 3/90	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1.4-Dichlorobenzene	2.2'-Oxybis(1-Chloropropane)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol		

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

UNITS: RESULT QUAL ACTIVITY QUAL ACTIVIT	LOCATOR: SAMPLE ID: COLLECTION DATE:	ER05 PC-ER05 08/12/93	93	ER07 PC-ER07 08/15/93	, 07 33	ER08 PC-ER08 08/15/93	08 93	ER09 PC-ER09 08/15/93	93	ER10 PC-ER10 08/17/93	93	ER11 PC-ER11 08/17/93	_ II 8
ugg/It         5         U <th>UNITS:</th> <th>RESULT</th> <th>QUAL</th> <th>RESULT</th> <th>QUAL</th> <th>RESULT</th> <th>QUAL</th> <th>RESULT</th> <th>QUAL</th> <th>RESULT</th> <th>QUAL</th> <th>RESULT</th> <th>QUAL</th>	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
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The control of the co		20	n	20	n	20	Ω	20	Ω	20	D	20	Ω
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ught         5         U		ν.	D	8	Ω	S	n	5	D	S	Þ	s.	Ω
ught         5         U		<b>v</b>	n	S	Ω	ĸ	D	S	ב	\$	D	s.	D
ugg/l         20         U         20		\$	n	5	Ω	S	D	5	n	•	ם	5	ם
ught         5         U         5         U         5         U         5           ught         5         U         5         U         5         U         5         U         5           ught         5         U         20         U         20         U         20         U         20           ught         5         U         5         U         5         U         5         U         5           viewt         ught         5         U <th>initrophenol</th> <th>20</th> <th>ם</th> <th>20</th> <th>n</th> <th>20</th> <th>Ω</th> <th>20</th> <th>n</th> <th>20</th> <th>Þ</th> <th>70</th> <th>Ω</th>	initrophenol	20	ם	20	n	20	Ω	20	n	20	Þ	70	Ω
ug/l         5         U         5         U         5         U         5         U         5           ug/l         5         U         20         U         20         U         20         U         5         U			Ω	5	Ω	5	D	S	Ω	S	n	\$	n
ugg/1         20         U         20			n	5	n	5	Ω	\$	Ω	5	Þ	S	Ω
ether ug/l 5 U 5 U 5 U 5 U 5 U 5 U 5 U 5 U 5 U 5			n	20	n	20	O	20	Ω	70	D	8	ם
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ug/l         20         U         20			Ω	\$	Ω	5	Ω	S	n	S	D	S	D
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ught         5         U         5         U         5         U         5           ught         5         U         5         U         5         U         5         U         5           ught         5         U         5         U         5         U         5         U         5           ught         20         U         20         U         20         U         20         U         5           ught         5         U         5         U         5         U         5         U         5           ught         5         U         5         U         5         U         5         U         5           ught         5         U         5         U         5         U         5         U         5           ught         5         U         5         U         5         U         5         U         5           ught         5         U         5         U         5         U         5         U         5           ught         5         U         5         U         5         U         5			ם	\$	Ω	5	n	\$	Ω	S	Þ	s.	P
ug/l         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5         U         5           ug/l         20         U         20         U         20         U         20         U         20           ug/l         5         U         5         U         5         U         5         U         5           ug/l         5         U         5		S	n	s	D	5	n	S	D	S	D	\$	ם
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hacene ug/l 5 U 5 U 5 U 5 U 5 U 5 U 5 U 5 U 5 U 5			D	ν.	Ω	S	ם	5	D	\$	Þ	S.	<b>-</b>
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ug/l         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5         U         5           ug/l         5			D	S	כ	S	D	5	D	S.	D	<b>S</b>	<b>-</b>
ug/l         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5         U         5           ug/l         5         U         4         J         7         J         J         5		. 5	D	5	D	\$	n	\$	D	S	Þ	S.	ם
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phthalate         ug/l         5         U         1         5         U         5           phthalate         ug/l         5         U         5         U         5         U         1           h)anthracene         ug/l         5         U         5         U         5         U         5           rran         ug/l         5         U         5         U         5         U         5           ubalate         ug/l         5         U         4         J         0.90         J         7         J         I		•		ı		•				•		•	
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ene ug/l 5 U 5 U 5 U 5 U 5 U 5 U 5 U 5 U 5 U 5		8	D	5	ם	2	Ω	S	ם			S	Þ
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Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

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ER10 PC-ER10 08/17/93		¥		n	S	<b>~</b>	, •	<b>.</b>	~	<b>~</b>	<b>~</b>	. •	, ч	n •	•	S	~	20	2	? •	7 '	<b>~</b>	S.	×	7		35		4		_		"	י נ	۰ و	•	•	4.50	•	7	,					
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ER09 PC-ER09 08/15/93	RESULT	•	-	S	S		ח י	v.	<b>V</b> O		•	٠ ٧	י ח	ç	<b>~</b>	S	٧.	, 5	9, 4	י ח	S	\$	5	\$	4	•	¥.	3	•	•	•	-	۰,	•	• 1	••	•	4	•	7	•					
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ER08 PC-ER08 08/15/93	RESULT		S	S	. •		S	s	v	v	J 4	י ח	S	S	ν.	. •		,	0.60	v.	S	5	٠,	·		•	36	50	P. 6.	4	4		-	m ·	m	<b>∞</b>	<b>o</b> c	4	4	,	9					
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ER07 PC-ER07 08/15/93	RESULT (		0.0	~		C .	×	•	. •	ο,	n '	'n	Ś	ν,	· •	, <b>u</b>	n •	n	20	ν,	<b>~</b>		. •	· •			;	35	•	4	•	-	•	e	•	•		4	٢	٠,	7	•				
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ER05 PC-ER05 08/12/93			v		n '	S	<b>~</b>	, ,	,	•	S	S	<b>S</b>		, .	י ח	S	S	20	<b>S</b>		, <b>u</b>	, L	n '	n ;	21		60.50	36.20	4	4	_	_	٣	**	· «	, 0	۰ ،	4.	4	7	7				
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LOCATOR: SAMPLE ID: TION DATE:	UNITS:		V	,	-60	/gn		3	ng n	ng/l	l/gu	ug/l	Vol.	9	ng n		l/gn	l/gn	l/an	/ou		2	ng,	ng/l	l/gn	l/gu		/gn	/Xn	l/gu	ug/l	l/gu	UXn	, an	, Lou	\$ 5	3	- Mar - Mar	/gn	l/gu	/gn	<b>78</b>				
LOCATOR: SAMPLE ID: COLLECTION DATE:																	j. Ka				1	ş	.30						i i i				i, ike	4.5												
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				maiate				Denzene	butadien	cyclopen	ethane	3-6 Ans	( )(a,a )		-N-Prop	iphenyla	e	2	hend	pinctio.	ž.			roethoxy	oethyl)	hexyl)pl			Dissolv		Siegolyed		Dissolv	,	-	, Dissoiv	_	n, Dissol	 24 34	<b>Dissolve</b>		solved				1
			* *************************************	Dimethyl phthalate	Fluoranthene	Fluorene	or or or or	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachlorochane	Indepoil 2 3-c dinovrene	mucino(1,2,	Isopnorone	N-Nitrosodi-N-Propylamine	N-Nitrosodiphenylamine	Naphthalene	Nitrohenzene	Destablishment	Femacinon	Phenanthrene	Phenol	Pyrene	bis(2-Chloroethoxy)methane	bis(2-Chloroethyl) ether	bis(2-Ethylhexyl)phthalate	METALS	Antimony	Antimony, Dissolved	Arcenic	Arrenic Dissolved	Revoltium	Danillium Dissolved	Cadminst	. Cadminan	Cadmium, Lissoived	Chromium	Chromium, Dissolved	Copper	Copper, Dissolved	Peal	Lead, Dissolved				

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

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ER11 PC-ER11 08/17/93	RESULT	0.20	•	<b>18</b>	•	m	•	4	•	m	•	73.30	•		2.50
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ER10 PC-ER10 08/17/93	RESULT	0.20	•	81	•	ю	٠	4		ю	•	4.60	•		0.25
0 m	QUAL	ָם		D		n		ם		'n					
ER09 PC-ER09 08/15/93	RESULT QUAL	0.20	٠	81	•	6	•	4	•	33	•	226	•		7
<b></b>	QUAL	n	D	D	n	D	n	ח	n	Ωľ	ηL	ם	n		
ER08 PC-ER08 08/15/93	RESULT	0.20	0.20	81	81	E)	E	4	4	3	E	4	4		7
	QUAL	Þ		D		ח		ם		ΩΓ					
ER07 PC-ER07 08/15/93	RESULT	0.20	•	18	•	e	•	4	ı	3	•	51.90	•		0.40
10	QUAL	n	ם	ם	ב	D	'n	Þ	n	ΩΓ	n <b>r</b>	n	Ω		
ER05 PC-ER05 08/12/93	RESULT	0.20	0.20	18	18	e	3	4	4	e	æ	4	4		7
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	<b>1/8n</b>	I/an	√8n	l/an	l/8α			ug/1	Ngu			l/an		drocarbons mg/l
		Mercury	Mercury, Dissolved	Nickel	Nickel, Dissolved	Selenium	Selenium, Dissolved	Silver	Silver, Dissolved	Thallium	Thallium, Dissolved	Zinc	Zinc, Dissolved	ТРН	Total Petroleum Hydrocarbons

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

ER16 ER17 PC-ER16 PC-ER17 08/26/93 09/12/93	RESULT QUAL RESULT QUAL	0.35 U 0.35 U	B 0.25	D	ti 0.25	. =	U 0.35	n	· •		0.25 U 0.25 U		O	U 0.30 U 0.30 U	U 0.20	U 0.30	0.25 U 0.25 U	D.	•	U 0.40	0.25 U 0.25 U			0.35 U 0.35 U			0.85	U 0.25	U 0.40	0.50 U 0.50 U		U 0.35		=	
ER15 PC-ER15 08/26/93	RESULT QUAL	11 35 0	0.35	0.40								, ,	U 05 0							0.40 U			•	0.35 U		ı	0.85 U	0.25 U	0.40 U	0.50 U	ı	0.35 U	0.35 U		0.50
ER14 PC-ER14 08/26/93	RESULT QUAL	11 36 0	6.0	0.0	0.40		0.35		0 55.0				11 030	0.30	0.00	0 07.0				11 070				0.35 U		•	0.85 U					0.35 U	0.35 U		0.50 U
ER13 PC-ER13 08/24/93	RESULT QUAL		0.35	0.35 U						0.35 U	0.30 0					0.70		0.00		1 0 40	0 25 0		1	0.35		1	11 580	11 36 0		0.50		0.35 U	0 35 U		U 05.0
ER12 PC-ER12 08/17/93	RESULT QUAL		•		-			0.35 U			0.30 U				.30			0.25 U			0.40	•		•	•	•	•			0.40		11 36 0	0.35		11 050
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	8010	1,1,1,2-Tetrachioroethane ug/l	1,1.1-Trichloroethane ug/l	1.2.2-Tetrachloroethane ug/l	1.2-Trichloroethane	.1-Dichloroethane ug/l	,1-Dichloroethylene	,2,3-Trichloropropane ug/l	,2-Dibromoethane ug/l	,2-Dichlorobenzene ug/l	,2-Dichloroethane ug/l	,2-Dichloroethylene ug/l	,2-Dichloropropane ug/l	,2-trans-Dichloroethylene ug/l			pylene	obenzene		ıyl ether	ene de la companya de	2-Hexanone ug/l			i-2-pentanone				oromethane			londe		

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

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ER17 PC-ER17 09/12/93	RESULT QU	0.40	. 0		0.30	() ·	05.0	3 .	0.30	95.0		1	0.15	0.20	0.00	3 ,	0 0	51.0		0.35	\$C.0	0.0	·	0.25	0.21			<b>~</b>	•	•	•	•	د	3 ~	•	,	
	QUAL	n	:	>	٤	٩				=	>		D	=	=	•	=	ع · د	>	Ξ	• =	=	=	=	•			D	)			Ξ	=	=	· =	•	
ER16 PC-ER16 08/26/93	RESULT QU	0.40		0.43	0.12	67:0	, ,	60.0	900	90.0	66.0	•	0.15	0.20	000	0.50	' 6	31.0	0.10	35.0	0.25	0.20	3	30.0	6.50	77.0		•	) <sup>1</sup>	, 1	•		٠ ٤	3 4	n ¥	'n	
	QUAL	n	;	<b>&gt;</b> ;	י כ	2	:	>	=	> :	>		æ	=	=	>	:	<b>:</b>	>		:	۹ د	ء =	) <b>:</b>	ء د	Δ		=	•			:	<b>:</b>	<b>:</b>	<b>:</b>	>	
ER15 PC-ER15 08/26/93	RESULT Q	0.40	• •	0.45	0.50	0.15		00	٠ ,	0.50	0.33	•	0 66	0.00	07:0	07.0		0.50	0.0	' 6	0.0	67.0	2.0	200	67.0	0.17		•	'n	•	•	• •	n (	3 *	n 4	n	
	QUAL	n		D	ם י	m	;	>	:	<b>&gt;</b> :	Ð		=	) <u>:</u>	<b>:</b>	>	;	<b>)</b>	Þ	:	<b>)</b>	o:	<b>&gt;</b> :	<b>&gt;</b> :	<b>&gt;</b> :	0		=	>			;	<b>)</b>	<b>-</b> :	<b>-</b> :	>	
ER14 PC-ER14 08/26/93	RESULT QU	0.40	•	0.45	0.50	0.29	' (	0.30	, (	0.30	0.55	•	21.0	0.13	07.0	0.20	•	0.50	0.15	1 0	0.35	0.25	07.0	200	0.00	0.25		·	n	•	•	١,	n ;	50	יי	n	
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ER13 PC-ER13 08/24/93	RESULT QU	0.40	•	0.45	0.50	0.21	•	0.30	. ;	0.30	0.55	•	91.0	0.13	07.0	0.20	•	0.50	0.25		0.35	0.25	0.11	vs :	0.25	0.19		•	^	1	•	•	<b>~</b>	20	<b>.</b>	<b>S</b>	
	QUAL			D	ם	89		n		Þ	ם		:	>		ם			Þ		<b>2</b> 2	<b>-</b>	>			m		:	<b>-</b>				<b>-</b>	>	Þ	Þ	
ER12 PC-ER12 08/17/93	RESULT Q	•	•	0.45	0.50	0.98	•	0.30	•	0.30	0.55	•		0.15		0.20		•	0.15		0.0	0.25	0.20	•	•	0.28		•	S	•	•	•	s.	20	S	<b>v</b> s	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	//an		l/gn	1/gn	l/gu	l/gu	l/gn	l/gn	/gn	l/gu	l/gn	1	ng/l	l/gn	l/gu	Ugn .	l/gn	l/gu	l/gu	l/gu	ng/l	l/gu	l/gu	ng/l	l∕gu			l/gu	//gn	V8n		Van (	√an	ug/l	l/gn	
COLLECT		Discomomethane	Ethylbenzene	Methyl bromide	Methyl chloride	Methylene chloride	Styrene	Tetrachloroethylene	Toluene	Trichloroethylene	Vinyl chloride	Xylenes (TOTAL)	8020	1,2-Dichlorobenzene	1,2-Dimethylbenzene	1,3-Dichlorobenzene	1,3-Dimethylbenzene	1,3/1,4-Dimethylbenzene	1,4-Dichlorobenzene	1,4-Dimethylbenzene	Benzene	Chlorobenzene	Ethylbenzene	Methyl-t-Butyl Ether	Styrene	Toluene	( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	CLP 3/90	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2,2'-Oxybis(1-Chloropropane)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

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ER17 PC-ER17 09/12/93	DECTIL T	17000	S	20	S	\$	*	ν,	20	<b>.</b>	•	, ç	ď	. •	, (	3 *	n <b>u</b>	n 4	n w	n •	n (	25	<sub>20</sub>	<b>Y</b>	×	S	S	S	<b>S</b>	ν.	· V	•	,	•	י ח	en '	YO 1	<b>S</b>	<b>S</b>	•		
	14110		Þ	D	Þ	n	1	=	=	=			<b>-</b> :	<b>&gt;</b> :	> :	<b>)</b> ;	o :	>				D		ם	מ	ב	ם	n	=	=	) <b>=</b>		>	;	•	ם	ב	D	ם	ם		
ER16 PC-ER16 08/26/93		RESULI	ν,	70	v,	*	•	, <b>v</b>	٦ (	3 *	n •	n (	3,	n '	n (	70	<b>.</b>	'n	09.0	S.	S	20	20	•	s	\$	•	. •		, w	n 4	י ח	n	• •	<b>~</b>	\$	\$	s.	ν,	\$		
		QUAL	Ω	n	ם	=		<b>-</b> :	<b>:</b>	<b>&gt;</b> :	<b>)</b>	<b>)</b>	e i	Þ	ם	Þ	ם	n	ב	ב	Þ	ם	n	ם	Ω	ם ס	=		<b>:</b>	<b>&gt;</b> ;	<b>)</b> ;	<b>&gt;</b> :	D		ם	ם	D	ם	D	D		
ER15 PC-ER15 08/26/93		RESULT	v	, 5	,	<b>, v</b>	n •	n <b>'</b>	<b>^</b> ;	20	S.	ν,	20	s.	S	20	s.	<b>S</b>	\$	s	\$	20	20	, v	•	, <b>v</b>	) <b>u</b>	n 4	יח	o,	vo '	\$	ς.	•	S	\$	ν.	· •	•	· •	)	
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ER14 PC-ER14 08/26/93		RESULT	,	n (	3 4	n '	'n	s.	S	20	s	s.	20	5	\$	20	'n	¥7	, wi	, v-	, <b>v</b>	۶ ر	3 6	Q*	n •	n •	n '	2	<b>~</b>	<b>.</b>	S	5	*	•	•	· -	- •	<b>, ,</b>	n 4	n -	-	
		QUAL R	;	o :	<b>)</b>	2	ר	n	ם	ם	Ω	Ω	ח	1	-	· <b>=</b>	=	) <b>=</b>	=	) <b>=</b>	<b>.</b>	<b>-</b> :	<b>)</b> :	<b>)</b> ;	<b>)</b>	D :	D	n	Ω	ם	n	n	=	)	=	<b>:</b>	<b>)</b>	<b>)</b> :	<b>)</b>	o :	•	
ER13 PC-ER13 08/24/93	2017	RESULT		5	20	S	S	\$	ν.	20	v	v	, 2	•	y v	۶.	3 <b>v</b>	<b>,</b>	· •	n <b>v</b>	י ח	n (	20	20	SO.	2	\$	\$	\$	<b>v</b>	v		· •	ר	' '	n '	'n	s '	S	S.	ν.	
		QUAL F		ב	ם	ם	ם	כ	=	n n	· =	=	) <b>:</b>	<b>.</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>-</b> :	<b>-</b> :	<b>)</b>	<u>י</u>	n	n	ב	ם	n	n	ח	=	=	=	<b>-</b>	>	;	•	ם	כ	ם	ם	n	
ER12 PC-ER12	66/11/80	RESULT		\$	70	ν,	•	, v	, <b>v</b>	, c	3 4	, <b>v</b>	٦ (	3,	n '	n (	92 '	n '	'n	'n	S.	<b>v</b> î	20	20	\$	Š	ς.	v	· •	. •	· •	· •	n '	n	•	s.	v.	<b>S</b>	s	S	\$	
LOCATOR: SAMPLE ID:	COLLECTION DATE:	UNITS: R		ug/l	UZ0	[/on	. Vo:	l Man	r/Sin	ng/I	ı/ân	I/Sn	l/gu	ng/l	ng/l	l/gu	ng/l	ng/l	l/gu	√Sn	l/gu	l/gn	l∕gu	l/gu	l/gu	l/gu	1/611	1/95 1/41:	1/3/u	1/Sn	l/an V = 1.	ngu.	ng/	l/gu	√gn	√gn	V8n	l/gu	1/Zn	l/gu	Ngu	
Ø	COLLECT			1 Warnettulnberry	A District percent	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methyl-4,6-Dinitrophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	4-Bromophenyl phenyl ether	4-Chloro-3-methyl phenol	4-Chloroaniline	4-Chlorophenyl phenyl ether	4-Methylphenol	4-Nitrosniline	4 Nitrophenol	4-Introphene	Acenaphinicae	Acettapitutyicite	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(ghi)perylene	Benzo(k)fluoranthene	Butyl benzyl phthalate	Carbazole	Chrysene	Di-n-butyl phthalate	Dianoctyl phthalate	Disease(a h)anthracette	Dibenzofiran	Dischal phihalate	Dictury: province:

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

ER16 ER17 PC-ER16 PC-ER17 08/26/93 09/12/93	AL RESULT QUAL RESULT	U 5 U 5	U S U S	U S U S	U 5 U 5	U 5 U 5	U 5 U 5	U 5 U 5	U S U S	U 5 U 5	U 5 U 5	U 5 U 5	S U	n	U 20 U 20	U 5 U 5	U 1 5	U 5 U 5	U 5 U 5	S	B 15 B 5		U 35 U 35	- 35	U 4 U	•	n 1 n	-	U 3 U 3		8 n 8	,	U 4 U 4	•	0 2 0 2	
ER15 PC-ER15 08/26/93	RESULT QUAL	v	S	\$	S	s,	\$	~	\$	5	\$	\$	ν.	\$	70	s.	~	S	\$	~	<b>∞</b>		35	•	4			•	e	•	•	•	4	,	2	•
ER14 PC-ER14 08/26/93	RESULT QUAL	s U	S U	s U	5 U	s U	5 U	5 U	5 U	5 U	5 U	5 U	s 0	S U	20 U	S U	5 B	5 U	5 U	5 U	35		35 U	35 U	4 U	4 U	n .	ח	3 N	3 U	n 8	n 8	_	5.70 B	2 O	2 U
ER13 PC-ER13 08/24/93	RESULT QUAL	5 U	S U	S U	S U	S U	S U	s u	5 U	S U	S U	S U	S U	S U	20 U	S U	S U	S U	S U	S U	5 B		35 U	•	4 U		n 1	•	3 O	•	n &	•	4 U	• •	2 O	•
ER12 PC-ER12 08/17/93	RESULT QUAL	S U	S U	S U	S U	S U	S U	5 U	S U	S U	5 U	5 U		S U	20 U	5 U	S U	5 U	5 U	5 U	7		35 U	•	4 UL	•	n .		3 C	•	N 8	•	4 U		2 O	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	Ngu .	I/an	Ngu	l/gu		diene				N-Nitrosodi-N-Propylamine ug/l	nine ug/l	l/an	l/gn	l/gu	1/8n	₩ n	Van	bis(2-Chloroethoxy)methane ug/l		thatate ug/l				ng/l	L/an		Vân P					Van	1/8n	Vân	l'an
		Dimethyl phthalate			Hexachlorobenzene	Hexachlorobutadiene	lopent	Hexachloroethane	Indeno(1,2,3-c,d)pyrene		-Propy	N-Nitrosodiphenylamine		Nitrobenzene	Pentachlorophenol	Phenanthrene			thoxy)1	bis(2-Chloroethyl) ether	bis(2-Ethylhexyl)phthalate			Antimony, Dissolved		Arsenic, Dissolved		Beryllium, Dissolved	٠	Cadmium, Dissolved		Chromium, Dissolved		Copper, Dissolved		Lead, Dissolved

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

ER17 PC-ER17 09/12/93	r qual	0.20 U	0.20	); •	<b>&gt;</b>	3 C	3 OF	D :	<b>4</b>	3 C	3 OL	8.50 OB	5.30 ()	í	0.70
B € 60	RESULT			-											
3 &	QUAL	D		<b>-</b>		<b>-</b>		D		Þ		<b>B</b> 0			6
ER16 PC-ER16 08/26/93	RESULT	0.20	•	81	•	က	•	4	•	m	•	8.80	•	,	0.50
	QUAL	ם		ח		ם		ם		Ω		æ			ם
ER15 PC-ER15 08/26/93	RESULT	0.20	•	18	•	9	•	4	•	ĸ	•	21.40			0.25
	QUAL	Ω	Þ	ם	Þ	n	D	n	Þ	D	ΩΓ	<b>B</b> 0	0		ב
ER14 PC-ER14 08/26/93	RESULT	0.20	0.20	18	<u>«</u>	3	e	4	4	æ	33	5.80	16.80		0.25
	QUAL	Ω		n		D		ם		UL		0			
ER13 PC-ER13 08/24/93	RESULT	0.20	•	18	•	က		4	•	ю	•	6.50	•		1.10
<b>8</b> 1	QUAL	Þ		n		n		ם	,	UL					
ER12 PC-ER12 08/17/93	RESULT	0.20		<u>\$</u>		m	•	4			•	4.30			0:30
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	/ <b>5</b> 0	1/011	110/1	Von	1/on	1/40	1/2m	. P	l/an	l/on	1/40	ug/l		mg/l
S COLLECT			Manuscript Dissolved	Mistel		Nickel, Dissolved	Scientian Circuit	Selenium, Dissolved	Silver	Silver, Dissolved	T. allian Distribut	Ting	Zinc, Dissolved		Total Petroleum Hydrocarbons

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

	QUAL	=	ם	D	D	ם	ם	n	י כ	<b>&gt;</b>	<b>&gt;</b>	;	<b>-</b> :	<b>)</b>	<b>&gt;</b> :	<b>)</b>	<b>&gt;</b> 1	<b>D</b>		<b>&gt;</b> :	•			<b>-</b>				>					<b>&gt;</b>			_			
FB02 PC-FB02 07/29/93	RESULT	0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	•	0.30	0.30	0.20	0.30	0.25	0.20	•	0.40	0.25	•	•	0.35		• 1	0.85	0.25	2.90	2.50		0.35	0.35	0.50	0.92	4.10			
	QUAL	=	<b>&gt;</b> =	<b>&gt;</b>	ם	מ	n	Þ					-			_	ם	<b>&gt;</b>	Þ	<b>&gt;</b>		<b>D</b>		)	<b>&gt;</b> :	>	>		<b>-</b>	ם	<b>&gt;</b>	Þ	Þ	D	<b>-</b>	ם			
FB01 PC-FB01 07/28/93	RESULT	0.35	01	2	2	9	01	0.35	0.35	0.30	10	0	0	0.30	0.20	0	0	0.20	01	0.40	0.25	0	11	0.35	0 :	2	0.85	0.25	0	9	01	0	2	2	9	10			
	QUAL	=	=	=	ם ס	n	n	D		Þ	Þ							D		D .				D			מ			o C		<b>n</b>				n o			
ER21 PC-ER21 09/15/93	RESULT	0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	٠	0.30	0.30	0.20	0.30	0.25	0.20	•	0.40	0.25	•	•	0.35	•	•	0.85	0.25	0.40	0.50	•	0.35	0.35	0.50	0.35	0.30			
	QUAL	=	<b>=</b>	=	=	=	n	ח	Ω	ם	n		D	ם	Ω	n	ם	n		Þ	ם			ם			n	ם	Þ	2		D	n	ם		Ω			
ER20 PC-ER20 09/14/93	RESULT	. 0	0.33	040	\$2.0	0.35	0.35	0.35	0.35	0.30	0.25	•	0.30	0.30	0.20	0.30	0.25	0.20	•	0.40	0.25	•	•	0.35	•	•	0.85	0.25	0.40	0.50	•	0.35	0.35	0.50	0.35	0.30			
	QUAL	:	<b>&gt;</b>	> <b>=</b>	=	=	ם ס	Ω	Ω	n	n		n	D	Ω	ם	ב	n		n	D			Ω			D	n	ב	n		ם	Ω	n		ם			
ER19 PC-ER19 09/13/93	RESULT		0.35	0.40	0.40	25.0	0.35	0.35	0.35	0.30	0.25	•	0.30	0.30	0.20	0.30	0.25	0.20	•	0.40	0.25	•	1	0.35	ı	•	0.85	0.25	0.40	0.50	1	0.35	0.35	0.50	0.17	0.30			
	QUAL	:	<b>&gt;</b> :	> =	<b>&gt;</b> =	> <b>:</b>	<b>)</b>	ם י	כי	ח	ם		ם	D	Ω	ם	n	ם		ם				Ω			ם	n		ם		ב		ם	ם	n			
ER18 PC-ER18 09/10/93	RESULT		0.35	0.33	0.40	25.0	0.35	0.35	0.35	0.30	0.25	,	0.30	0.30	0.20	0.30	0.25	0.20	•	0.40	0.25	•	•	0.35	•	•	0.85	0.25	0.40	0.50		0.35	0.35	0.50	0.35	0.30			
LOCATOR: AMPLE ID: ION DATE:	UNITS:	:	ug/l	ng/	ng/l	ng/	ng/l		ug/l	l/an	Ngu	ne/J	ug/l	ug/l	ng/l	/an	/Zn	l/an	ug/l	ng/l	l/gn	ng/l	/an	ug/l	ug/l	l/gu	ug/l	ug/]	ug/l	7611	ne/J	Van.	Van	l/an	ng/l	ug/l	) 		
LOCATOR: SAMPLE ID: COLLECTION DATE:	D .	0108	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-1 richloroethane	1, 1-Dichlorochane	1.3.4 Teichloromann	1.2.Dibromoethane	1 2-Dichlorobenzene	1.2-Dichlorocthane	1 2-Dichloroethylene	1.2-Dichloropropane	1.2-trans-Dichloroethylene	1.3-Dichlorobenzene	1 3-cis-Dichloropronylene	1 3-trans-Dichloropropylene	1 4-Dichlorohenzene	2-Butanone	2-Chlomethylvinyi ether	2-Chlorotoluene	2-Hexanone	2-Propanone	4-Chlorotoluene	4-Methyl-2-pentanone	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bosmoform	Carbon Disuffide	Carbon Tetrachloride	Chlomhenzene	Chlomethane	Chloroform	Dibromochloromethane			

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FB02 PC-FB02 07/29/93	LT QUAL	0.40	•	0.45	0.50	0.14		0.30		0.30	0.55				0.15	0.20	0.20	٠	0.50	0.15	•	0.35	0.25	0.20		0.25	0.25			S			•	<b>S</b>	۶,	n 1	n		
- <b>X</b> S	RESULT																_			_		=		· =	· =	• <b>=</b>	۵ د	2		מ	Þ	<b>5</b>	D	Þ	<b>:</b>	<b>.</b>	Þ		
	OUAL	ם	Ω	>	2	~	=	=	=	=	=	ס			B B	n (	ח		מ											_	_	_							
FB01 PC-FB01 07/28/93	RESULT	0.40	10	01	2	2,	2 ب	2 5	2 5	2 5	2 5	2 2			1.4	0.20	0.20		•	60 81 0		٠ ,	5	0.0	*	າ້	0.23	7.0		2	10	10	10	01	25	10	10		
	Ϋ́	=	)	D	· =	ء د	٩	:	>	:	<b>)</b>	>			ח	ח	· =	•	=	<b>&gt;</b> :	>	:	> <b>:</b>	<b>-</b> :	<b>&gt;</b> :	<b>&gt;</b> :	<b>&gt;</b> :	>		ם				ດ	ר	ם	ח		
ER21 PC-ER21 09/15/93	RESULT QUAL	970	?	0.45	9	0.0	0.00	, ,	0.30	, ,	0.30	0.33	•		0.15	0.70		5	9	0.0	C1.0	. ;	0.35	0.25	0.20	s d	0.25	0.73		v				S	20	S	ς.		
m ∑ ⊗	RESUI																																						
	QUAL	:	>	=	· :	<b>-</b>	œ	;	>		<b>)</b>	<b>-</b>			Ξ	<b>=</b>	ء د	Ω			œ		>	ם	<b>-</b>	Þ	כ	Ω.		=	)			Ω	ב	Ω	ם		
ER20 PC-ER20 09/14/93		9	9.0	, 0	C <del>.</del>	0.50	0.30		0.30		0.30	0.55			0,0	07.0	0.20	0.15	9.0		0.37	9.0	0.35	0.25	0.20	S	0.25	0.24		v	י ר	,		v	20	~	s		
<u> </u>	RESULT																																				_		
	QUAL	;	<b>D</b>	:	>	ב	<b>8</b>		Þ		Ω	D			:	o ;	•	<b>2</b>			B				ם •	Ω	ח			:	>			=	=	) <b>=</b>	ם ס		
ER19 PC-ER19 09/13/93	RESULT		0.40		0.45	0.50	0.77	•	0.30	•	0.30	0.55	•		•	0.15	0.20	0.18	0.0	٠	0.59	0.04	0.35	0.25	0.20	S	0.25	0.22		•	^	•	•		٠ د	3 ~	. •	1	
			_		<b>5</b>	ם	82		Ω		מ	n				m	ם	2		n	Ω		n	n	n	n	n	2	I		Þ			:	<b>&gt;</b> :	<b>)</b>	) <b>=</b>	)	
<b>8</b> €	QUAL	,	<b>D</b> 0													<b>8</b>	2	18		0.50	0.15		0.35	22	20	<b>.</b>	25	0.39	ì										
ER18 PC-ER1	RESULT	į	0.40	•	0.45	0.50	0.30	•	0.30	•	0.30	0.5	•			0.38	0	0.1	•	Ö	Ö	•	C	Ö	0	· •			•		v.	•	•	•	n (	≼ `	'n	•	
S G G			V8n		ug/l	1/011	l/on	V91	Va:	/on	l/ou	ug/l	ng/l			ng/I	ug/J	Van	l/an	l/sn	1/611	Von	701	101	/01	1,97	1,80		, and a second	75	ug/l	ng/l	ng/l	l/gu	√8n	1/8n	ng/l	ngn	
LOCATOR: SAMPLE ID: TION DATE:	25	5																															- 5-	ř.		3.			
LOCATOR: SAMPLE ID: COLLECTION DATE:																				•	<u> </u>										Пе		,		propane	-	7		
	í		2					2010		ylene	1	)   	AL	ì		enzene	en7ene	Phypub	44244	Jenethen?	uny locate	enzene	cenzene	er Leg	ō	ļ	/ Elner				robenze	benzene	benzene	benzene	1-Chlorc	propheno	oropheno	phenol	
			Dibromomethane	Eshvibenzene	Mathul bromide		Methyl chloride	Memylene chionae		Tetrachioroemyiene	<u>ء</u>	I nenioroeuryiene Vinal chloride	Villy Cilionics  Xvlenes (TOTAL)			2-Dichlorobenzene	7 Dimethylhenzene	1.2 Dichlorohenzene	2 Dimethylhenzene	1,3-Dimeniyibenzene	, Cillic	,4-Dichlorobenzene	I,4-Dimelnyibenzene	ene	Chlorobenzene	Ethylbenzene	Methyl-t-Butyl Ether	910	ene	CLP 3/90	1,2,4-Trichlorobenzene	1.2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2,2'-Oxybis(1-Chloropropane)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	
			Dibror	Fihvlh		Mcuny	Mem	Mem	Styrene	Tetra	loluene	V:	Xvlen		8020	1.2-D	1 .	1,41	1.0,1	1-0,1	٠,٠,٠	1-4-1	4, 1	Benzene		H.	Zer Zer	Styrene	Toluene		1.2.	1.2	1.3-	4.1	2,2	4,4	2,4	4,7	A.

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LOCATOR: SAMPLE ID: COLLECTION DATE:	ER18 PC-ER18 09/10/93	18 R18 1/93	ER19 PC-ER19 09/13/93	6 E	ER20 PC-ER20 09/14/93	33.0	ER21 PC-ER21 09/15/93	21	FB01 PC-FB01 07/28/93	33.11	FB02 PC-FB02 07/29/93	ci e
UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
2.4-Dimethylphenol	\$	n	S	n	S	Ω	S	n	01	Þ	<b>~</b>	Ω
	20	ם	20	ם	20	D	20	n	22	Þ	20	D
	S	ם	S	n	S	Ω	\$	D	01	ם	<b>~</b>	Þ
	83	ם	s	D	s	D	\$	D	10	D	ν,	ם
2	w	D	S	Ω	S	D	5	Þ	0	ם	s.	D
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2-Nitronhenol	3 ~	<b>=</b>	3 ~	o	9 <b>,</b>	<b>)</b>	3 ~	<b>&gt;</b>	3 2	) <b>)</b>	, v	<b>&gt;</b>
enzidine	Ś	ם	Ś	o D	. 50	n	S	D	10	D	νς	Ω
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I phenyl ether	S	n	\$	D	\$	Ω	5	D	10	n	\$	D
	\$	Ω	S	D	\$	Ω	\$	n	10	n	S	D
** ** ** *** ** ** **	\$	ם	v	Ω	S	Ω	5	ם	10	ם	S	ם
4-Chlorophenyl phenyl ether ug/l	S	Þ	5	Ω	5	D	5	n	01	Ω	s.	Þ
4-Methylphenol		n	5	Ω	<b>S</b>	Þ	5	D	10	Þ	S.	<b>&gt;</b>
4-Nitroaniline		n	20	Ω	20	D	20	n	25	Þ	20	<b>D</b>
4-Nitrophenol ug/l		ח	20	n	20	ם	20	D	z	>	20	<b>-</b>
Acenaphthene ug/l	S	Ω	S	n	S	D	S	ם	<u>0</u>	<b>&gt;</b>	<b>S</b>	) י
Acenaphthylene ug/l	2	O	\$	D	S	D	S	Þ	9	Þ	<b>Y</b>	<b>&gt;</b>
Anthracene ug/l		כ	\$	n	S	Ω	S	Þ	2	<b>&gt;</b>	<b>S</b>	<b>&gt;</b> :
ene.		n	\$	ם	S	<b>-</b>	\$	Þ	01	<b>&gt;</b> :	<b>v</b> o (	<b>)</b>
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nthracene	 	: כ	<b>S</b>	<b>)</b>	SO 1	<b>&gt;</b> :	c '	<b>:</b>	₽:	<b>-</b>	n *	<b>:</b>
		ב	2	n	ς.	Þ	S.	<b>&gt;</b>	01	<b>&gt;</b>	י ח	<b>&gt;</b> :
Diethyl phthalate	2	n	S	ם	ö	0.90	\$	D	01	>	n	•

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

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FB02 PC-FB02 07/29/93	RESULT	8	<b>v</b> 1	· vo	. •	٠ ٧	n <b>'</b>	S)	s.	S	<b>~</b>	<b>ν</b>	٠,	•	•	, 5	4	٠,	n •	n	S	ν.	e		40.40	•	*	•		•	e	•	•	•	120	, '	. 9		•	
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FB01 PC-FB01 07/28/93	RESULT	5	2 5	2 5	2 5	2 :	0	10	10	10	01	2	2 5	2	2 5	2	<b>Q</b> :	2	01	2	2	01	17		35	•	4		-	•	**	•	· eC	, '	•	ŕ	' (	7	•	
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ER21 PC-ER21 09/15/93	RESULT	•	n •	n •	n '	v	5	ς.	. •	, <b>v</b>	, <b>v</b>	. •	n 4	n •	o •	n ;	20	5	ν.	ς.	\$	•	4	•	45	. X.	3	•	•	-	- 4		~ <u>c</u>	21	× ;	<b>.</b>	4	7	7	
3 20 93	QUAL	:	<b>)</b>	o :	<b>-</b>	n	ם	ח	) <b>=</b>	) <b>=</b>	> =	<b>:</b>	<b>&gt; :</b>	<b>)</b> :	0	D	כ	כ		1	=	=	2	۵	=	=	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	) <b>:</b>	o :			<b>⊃</b> :	C C	<b>D</b> #	2 O	2 U	
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ER19 PC-ER19 09/13/93	RESULT		S	ν.	S	v	, <b>.</b>	) <b>u</b>	n •	ימ	<b>~</b> `	S	\$	S	5	S	20	•		٠ •	O 4	O 4	C ;	14	١	45	•	4	•	4	•	·s	•	21	•	15	·			
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ER18 PC-ER18 09/10/93	RESULT		\$	8	•	. •	7 ¥	n '	<b>V</b> 1	S.	S	~	S	<b>~</b>	ς.	<b>v</b>	, ככ	3 4	n ¥	י ח	•	<b>.</b>	<b>S</b>	2		35	35	4	*	-	-	т.	•						- ·-	
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LOCATOR: SAMPLE ID: COLLECTION DATE:							•	6)	tadiene		rene		vlamine	mine								)methane	ether	thalate			pg.				þ	<b>!</b>	ed	<b>}</b> .	- T	NGG NGG				
			Timeshall ahthelete	Difficulty piragan	Fluoranuciic	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-c,d)pyrene	Isonhomne	N. Nitrosodi-N-Pronvlamine	N Nitrosodinhenylamine	N-relibolon	Napomaiciic	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene	bis(2-Chloroethoxy)methane	bis(2-Chloroethyl) ether	bis(2-Ethylhexyl)phthalate	METALS	Antimony	Antimony Dissolved	Arsenic	Amenic Dissolved	Rerelliam	Beryllium, Dissolved	Cadminm	Cadmium. Dissolved	Caumann, Freeze	Chromium Discoluted	Chromium, Lisses	Copper	Copper, Dissolved	Lead	Lead, Dissolved

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

	LOCATOR: SAMPLE ID: COLLECTION DATE:	DR: ER18 ID: PC-ER18 IE: 09/10/93	30 E	ER19 PC-ER19 09/13/93	3 0	ER20 PC-ER20 09/14/93	3 Q	ER21 PC-ER21 09/15/93		FB01 PC-FB01 07/28/93	13	FB02 PC-FB02 07/29/93	2 2
	UNITS:	TS: RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Mercury		ig/∏ 0.20	ם	0.20	n	0.20	Ω	0.20	n	0.20	n (	0.20	D (
Mercury, Dissolved		ug/1 0.20	n C	•		0.20	ם	0.20	D	•		٠	
Nickel	.7	1/gr	D	35	Ω	35	D	35	Þ	18	ם	81	Ω
Nickel, Dissolved		1/gn	Ωľ	•		18	Þ	18	n	•		•	
Selenium		18/1 3	n	3	Ωľ	3	ď	6	ΠΓ	၉	D	e	ď
Selenium, Dissolved		ug/l 3	ď	•		~	~	•		•			
Silver		ug/l	n	4	D	4	ח	4	n	4	Þ	4	n
Silver, Dissolved		ug/l 4	IJ	•		4	n	4	ם	•		•	
Thallium		ug/l 3	UL	3	ΠΓ	3	ΩΓ	3	Π	6	D	e	UL
Thallium, Dissolved		ug/l 3	UL	•		3	'n	6	5	,		•	
Zinc		ug/1 6.80	90 (	8.30	0	8.90	0	5.40	0	0	ם	859	
Zinc, Dissolved		ug/l 4	<b>NF</b>	•		4	D	4		٠		•	
Ton													
Total Petroleum Hydrocarbons		mg/l 0.25	n .	0.25	ב ב	0.25	n :	0.80		0.25	s u	0.25	n s

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

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TB01 PC-TB01 07/28/93			0.35	0.35	0.40	0.25	0.35	0.35	0.35	25.0	0.30	0.25		0.30	0.30	0.20	0.30	0.25	0.20	•	0.40	0.25	•	٠	0.35	•	•	0.85	0.25	0.40	0.50	•	0.35	0.35	0.50	0	0				
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FB07 PC-FB07 09/10/93			0.35	35	9	, c	0.45	0.35	0.33	0.33	0.3	2,50	9.0	0 30	9.0	0 20	0.30	0.25	0.20		0.40	0.25	į	•	0.35	•	•	0.85	0.25	0.40	0.50	•	0	Ö	Ö	Ö	Ö				
r Σ 8	5	RESULT																																							
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FB06 PC-FB06	111/93		,	C. 5	0.21	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	٠,	0.30	0.30	0.20	0.50	7.0	0.20	. 0	5 6	0.72	•	٠ (	0.33	•	٠٠	0.83	3 6	0.40	ż	ح ،	, c	i c	· c	Ö				
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		QUAL	•	_	_	_		_			_				_	_	_	_	<b>~</b>	0		0	ς,			ž.			<b>%</b>	23	0.40	0.50	;	0.35	0.35	00.0	0.33	3			
FB05 PC-FB05	08/23/93			0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25		0.30	0.30	0.20	0.30	0.25	0.20	•	0.40	0.25	•	•	0.35	١	٠	0.85	0.25	ò	Ö	• •		o	<i>-</i>	<b>-</b>	>			
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FB04 PC-FB04	08/23/93			0.35	0.35	0.40	0.25	25.0	35.0	0.35	3,5	0.30	0.25		0.30	0.30	0.20	0.30	0.25	0.20	•	0.40	0.25	١	٠	0.35	1	•	0.85	0	7	4	•	Ö	0	0	0				
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FB03 C-FB03	08/10/93			75.0	26.0	5	9.40	0.23	0.35	0.35	0.35	0.3	0.50	7.0	, 0	0.00	0.00	30	3	200	; ,	0 40	0.40	•	•	Č	;	•	0.85	; è	; <del>-</del>	~	۱ ۱	Ċ	Ö	O	0	60			
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					rachlo	loroed	rachlo	loroct	roetha	roethy	lorop	noetha	robeni	roetha	roethy	ropro	Dichlo	ropen	chloro	Dichlo	orober	2	thylvi	oluene	) <u>1</u> 6	one	toluen	-2-pen		nzene	lorom	chloro	E.	Disalt	Tetrac	CIIZCII	thane	ochlor			
					1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1.2.2-Tetrachloroethane	1.2-Trichloroethane	1-Dichloroethane	1-Dichloroethylene	2.3-Trichloropropane	2-Dibromoethane	2-Dichlorobenzene	,2-Dichloroethane	2-Dichloroethylene	,2-Dichloropropane	,2-trans-Dichloroethylene	,3-Dichlorobenzene	,3-cis-Dichloropropylene	,3-trans-Dichloropropylene	1,4-Dichlorobenzene	2-Butanone	2-Chloroethylvinyl ether	2-Chlorotoluene	2-Hexanone	2-Propanone	4-Chlorotoluene	4-Methyl-2-pentanone	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon Disultide	Carbon Tetrachlonde	Chloropenzene	Chloroethane	Chiorogenia Dihromochloromethane			
				8010	1,1,1	1.1.1	1.12	1.1.2		=	1,1	1.2	1.2-	1,2-	1,2-	1,2	1,2-	1,3-	1,3	£,1	1,4	2-B	2-C	5 <del>.</del> C	2-F	2-1	4	4-1	æ	Ā	Ä	Ā	៳៑	Q.	O I	ا ن	ا ب	≃. ر	۱. '		

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

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101 TB01 8/93		0.40	. 0 45	950	200	ġ.,	0.30	<u>.</u>	0.30	0.55			0.36	0.20	0.15	0.18		0.13	0.18	0.35	0.25	0.20	<b>S</b>	0.10	0.25										
TB01 PC-TB01 07/28/93	RESULT		٠ ,			, ,		•	0	Ŭ			Ū		•	•																			
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FB07 PC-FB07 09/10/93	RESULT Q	0.40	, 0	C. C.	0.00	0.58	0,0	-	0.30	0.55	•		0.36	0.20	0.26	•	0.50	0.23	•	0.35	0.25	0.20	sc.	0.25	0.12		s	•	•	•	8	ם:	ָר ב	•	
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FB06 PC-FB06 08/11/93		0.40	, 2	0.40	0.50	0.14	. 0	25.	0.30	0.55			0.40	0.20	0.34		0.50	0.15		0.35	0.25	0.20	2	0.25	0.25		٠,		,		5	ם	D	v.	
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		_			<b></b> ,	_	-	-	-	'n			=	- =	· =	)	n	n		Ω	Ω		n	n	B		=	)			n	20	\$	n	
<b>4</b> 5	QUAL	m o				_	:		111				- -							5	23	0		25	=										
FB04 PC-FB04 08/23/93	RESULT	0.40	• •	0.45	0.50	0.30	, 6	030	0 30	0.55	•		0.68	0.20	0.20		0.50	0.15	•	0.35	0.25	0.10	8	0.25	0.11		•	, '	•	•	\$	~	8	S	
	QUAL	Ω	;	<b>&gt;</b> :	ב		:	>	=	ם מ			~	=	=	•	n	ם י	,	D	n	Þ	ם	n	8		=	1			D	n	ď	D	
FB03 PC-FB03 08/10/93		0.40		0.45	0.50	0.29		0.30	0.0	0.55	,		0 24	000	0.20	? .	0.50	0.15		0.35	0.25	0.20	5	0.25	0.14		•	י ר			*	20	2	2	
F. C. 18	RESULT				_	_																	_											·	
LOCATOR: SAMPLE ID: TION DATE:	UNITS:	U∕8n	Vgn	ng/l	ng/l	∑80°	√an ∵	l/gn	,	/3n	√gn		, ,	. 6.	Len Len	. Kon	[/sn	l/an	/an	ug/	/an	l/an	ug/l	ug/	) Ra		•	, (è			Van	l/gu	Ng/l	l⁄8n	
LOC. SAMP																															9				
LOCATOR: SAMPLE ID: COLLECTION DATE:																	7ene	21123									į	2			2 2'-Oxyhis (1-Chloropropane)				
J		ane		de	qe	loride		hylene		2 10 10	TAL)		3020	2 Dienethalbergene	,2-Dimeniyibenzene	3 Dimethylbenzene	3/1 4-Dimethylbenzene	4-Dichlorohenzene	4-Dimethylbenzene		ě		Methyl-t-Butyl Ether	,			CLF 3/90	1,4,4-1 Helifological	1,2-Dichlorobenzene	1,3-Dichlombenzene	G-Chlor	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	ophenol	
		Dibromomethane	Ethylbenzene	Methyl bromide	Methyl chloride	Methylene chloride	2	Fetrachloroethylene	ne	Vinyl chloride	Xylenes (TOTAL)		10.01.40.50	Victimoto V	nincury. Yoklomi	Jimethyl	4-Ding	ichloro	Jimethy)	ene	Chlombenzene	Ethylbenzene	vl-t-But	ie,	ene	9	CLP 3/90	District	Dichlor	Dichlor	Oxybis	5-Trichl	6-Trichl	2,4-Dichlorophenol	
		Dibro	Ethylt	Methy	Meth)	Methy	Styrene	Tetra	Title	Vinv	Xyler	, v )	8020	1,4,1	1-7,1	1-0,1	1,61	4	14	Renzene	140	Ethy	Meth	Styrene	Toluene	į	֓֞֝֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓	į .	4		2.3	4.7	2,4	2,4	

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

TB01 PC-TB01 07/28/93	AL RESULT QUAL	•	•	. n	-	· • :	•	•	•	. n	•	•	•	ם	-	,	•	· •	n			•	'n		D:	D :	·.		·	•	D	•	n	· •	٠ .	· n		• 1	
FB07 PC-FB07 09/10/93	RESULT QUAL	ם	D	*	• •	ה י	vs.	n	n	S	Þ	20	ם	<b>~</b>	2	S	Ω	<b>~</b> :	s.	n	20	D	٠c	v.	<b>.</b>	<b>~</b>	<b>.</b>	<b>~</b> '	<b>v</b> o (	S.	<b>~</b>	•	S	\$	s.	ν.	~	, •	
FB06 PC-FB06 08/11/93	RESULT QUAL	U 5	U 20	20		o :	S U	U 5	U 20	S U	U 5	20 U	0 5		20 U		U S	S U	5 U	U 5		U 20	5 U	S U	s U	s U	S U	5 O	S U	s 0	S U		5 U	5 U	5 U	S U	· ·	) i	
FB05 PC-FB05 08/23/93	QUAL	U 5	U 20	; =		S 0	S U	u s	U 20	s U	U S	20 U	u s	S U	<b>n</b> 07	s U	0 S	s u	s u			U 20			s u	S U	S U		S U	S U	s u	•	S U	5 U	S U	) <del> </del>		ה ה	
·	QUAL RESULT	· ·	90	<b>:</b> =	<b>)</b>	Þ	Þ	5	20	D	S	n	~	Ω	· ·	n	5	n	n	\$	Þ	70	Ω	n	n	Ω	n	ם	Ω	n	Ω		n	D	ָ בּ	<b>=</b>	> =	>	
FB04 PC-FB04 08/23/93	L RESULT	<u>ہ</u>	Α.	. •		5	J 5	J 78			UR	U 20			U 20	U S	L			UR	U 20	UL R		U S	U S	U S	U 5	U 5	U S	U S	U S	٠	u s	0		· •	· ·	2	
FB03 PC-FB03 08/10/93	RESULT QUAL	S UL	ָרָ קי	9	n	<b>~</b>	<b>v</b>	· ·	20 UL			70	S UL	٧.	70		S OIL	٠,	· <b>S</b>	v	_	20 U		~	s	ς.	5	S		S	S		v	a wa	, <b>•</b>	, <b>v</b>	, t	n	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	1 4 Dimethylphenol	<b>.</b>			2.6-Dinitrotoluene	2		nitrophenol					enzidine.		d nhenvi ether			phenyl ether							hracene		thene						phthalate			nuracene	Dibenzofuran ug/1	· Committee of the comm

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

LOC	LOCATOR:	FB03	5	FB04	_ 3	FB05	× 5	FB06	, c	FB07	. !	TB01	
COLLECTION DATE:	DATE:	08/10/93	ຊຫຼ	PC-FB04 08/23/93	93	PC-FB05 08/23/93	93 93	PC-FB06 08/11/93	93 gg	PC-FB07 09/10/93	93	PC-TB01 07/28/93	2 2
נ	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Dimethyl phthalate	V8n	s,	D	ν.	D	₩.	n	٧.	Þ	•		•	
Fluoranthene	l∕gu	\$	ם	\$	ם	ν,	Ω	ν,	Þ	*	ם ס	•	
Fluorene	ng/l	\$	D	\$	n	ĸ	Ω	8	D	<b>⋄</b>	Þ	•	
Hexachlorobenzene	√gn	S	Þ	\$	D	\$	Ω	ς.	D	\$	D	•	
Hexachlorobutadiene	√gn	<b>S</b>	D	S	Þ	S	Ω	ν,	ם	8	ם	•	
Hexachlorocyclopentadiene	ng/l	S.	n	S	D	\$	n	S	ם	8	ם	•	
Hexachioroethane	l/gn	<b>~</b>	D	S	D	2	Ω	S	D	· <b>S</b>	ם	•	
Indeno(1,2,3-c,d)pyrene	ng/J	<b>.</b>	Þ	5	D	\$	n	S	ם	. <b>v</b>	ם	•	•
Isophorone	ng/J	<b>~</b>	Þ	S	n	5	Ω	ς.	Ω	<b>~</b>	ב	•	
N-Nitrosodi-N-Propylamine	ng∕l	S	D	5	n	\$	D	· <b>s</b> s	ב	, <b>v</b> r	<b>=</b>	1	
N-Nitrosodiphenylamine	l/8n	S	D	<b>.</b>	n	5	ם	<b>S</b>	ם	**	<b>-</b>	•	
Naphthalene	ng/l	\$	n	S	Ω	\$	D	<b>~</b>	כ	**	מי	•	
Nitrobenzene	ng/]	2	n	5	Ω	S	D		ם	, <b>v</b> 1	D	•	
Pentachlorophenol	l∕gu	20	ī,	∝	20	D	20	O	20	n	•		
Phenanthrene	l/gu	\$	Ω	5	n	S	Þ	5	ם	•	n	•	
Phenol	ng/l	S	ΛΓ	~	~	O	S	n	\$	ם ב	. •		
Pyrene	ng/l	v.	n	5	Ω	8	n	5	ב	, <b>v</b> î	ם	•	
bis(2-Chloroethoxy)methane	ng/l	s.	n	\$	Ω	v.	Ω	\$	n	, v	Þ	•	
bis(2-Chloroethyl) ether	ng∕l	S	n	\$	n	*0	n	8	D	*	<b>&gt;</b>	•	
bis(2-Ethylhexyl)phthalate	l∕gu	S	n	4	æ	=	<b>2</b>	6	8	9	<b>2</b>	•	
METALS													
Antimony	[/ān	35	Ω	35	=	35	=	36	=	36	:		
Antimony, Dissolved	ng/l	'	•	;	•	·	>	Ç,	>	CC	>	•	
Arsenic	ng/l	12.10		4	D	4	D	4	=	٠ ٦	=	•	
Arsenic, Dissolved	l∕gu	•		•			ı		)	• •	•		
Beryllium	l∕gu	_	D	_	D		n	-	=	-	=	•	
Beryllium, Dissolved	ng/l	•		•			•		)		•	•	
Cadmium	l/an	3	Ω	m	ם	•	11		Ξ	• ••	=	•	
Cadmium, Dissolved	/gn	•		•	ı	'	•	<b>,</b> '	•	<b>)</b> (	•	•	
Chromium	l/gu	•	n	•	D	•	n	œ	1	ec.	=		
Chromium, Dissolved	√8n	•		•		. 1	1	, •	•	, ,	•	•	
Copper	√gn	7.90	0 OB	4	n	4	4.50 OB	4	n	4	Ω	1	
Copper, Dissolved	/gu	٠,	:	٠,	:	•		•		•		•	
Tand Discolored	/gn	7	>	7	ď	7	Ω	7	Ω	2	Þ	•	
Lead, Dissolved	ng/1	•		•		•		•		•		•	

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

TB01 PC-TB01 07/28/93	RESULT QUAL					, ,			•
FB07 PC-FB07 09/10/93	RESULT QUAL RE	0.20 U	18 U	8.10 B	D .	3 UL	D .		3.10
FB06 PC-FB06 08/11/93	RESULT QUAL 1	0.20 U	U 81	3 C	. 4 U	3 OL	5.30	•	0.25 U
FB05 PC-FB05 08/23/93	RESULT QUAL	0.20 U	U 81	3 U	4 U	; 3 UL	43.60	•	0.70
FB04 PC-FB04 08/23/93	RESULT QUAL	0.20 U	18 U	3 U	4 U	3 UL	5.30 0		1.10
FB03 PC-FB03 08/10/93	RESULT QUAL	0.20 U	18 U	, 3 U	- 4 U	3 UL	13.30	,	1.60
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	Mercury	Mercury, Dissolved ug/l	Jissolved	Selenium, Dissolved ug/l Silver ug/l	Dissolved	Thallium, Dissolved Zinc ug/l	Zinc, Dissolved	TPH Total Petroleum Hydrocarbons mg/l

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

LOCATOR: SAMPLE ID: COLLECTION DATE:	TB02 PC-TB02 07/27/93	3	TB03 PC-TB03 07/29/93	£ £	TB04 PC-TB04 07/31/93	93 93	TB05 PC-TB05 08/01/93	5 93	L M &	TB06 PC-TB06 08/09/93		TB07 PC-TB07 08/10/93	
UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT		QUAL	RESULT	QUAL
	,	;	•	;	ć	:	75.0	=		35	=	0.35	a
ane	0.35	o:	0.35	o :	0.35	o =	0.35	2 4		35.0	) <b>=</b>	0.35	כ
	0.35		0.35	o :	0.33		0.30			0.40	<b>=</b>	0.40	ם
lane	0.40	) =	0.40	) <b>:</b>	25.0		0.25	_		0.25	ם	0.25	ם
2	67.0		0.35		0.35		0.35			0.35	ם	0.35	ם
1;1-Dichloroemane	0.35		0.35		0.35	15 U	0.35	35 U		0.35	D	0.35	Þ
	0.3		0.35	S U	0.35	15 U	0.35			0.35	Þ	0.35	e :
		o s	0.35	s u	0.35		0.35			0.35	<b>&gt;</b>	0.35	<b>&gt;</b> :
		n 0	0.30	n 0	0.30		0.30			0.30	<b>&gt;</b>	0.30	: כ
		s u	0.25	o s	0.25	25 U	0.25	25 U		0.25	<b>&gt;</b>	0.25	<b>-</b>
4. 33 4. 9			•		•		•				;		:
	0.30	0 0	0.30	<b>n</b> 0	0.	0.30 U	0	_		0.30	<b>&gt;</b>	0.30	<b>)</b>
vlene		n 0	0.30	0 0	0	0.30 U	0		_	0.30	<b>-</b>	0.30	<b>&gt;</b> :
	_	n 0	0.20	n 0	0	0.20 U	0			0.20	ם	0.20	<b>&gt;</b> :
olene		n 0	0.30	n 0	0	0.30 U	0		_	0.30	>	0.30	<b>&gt;</b> :
9		-	0.25	.5 U	Ö		0		_	0.25	ם	0.25	<b>&gt;</b> :
	0.20	O O	0.20	O 0	Ö	0.20 U	0.	0.20 U	_	0.20	<b>&gt;</b> .	0.20	>
			•		1		•				:	, 6	:
2-Chloroethylvinyl ether ug/l			0.40		o		O	0.40 U		0.40	<b>&gt;</b> :	0.40	<b>-</b>
2-Chlorotoluene ug/l	1 0.25	.s u	0.25	.s u	o	0.25 U	o o	0.25 U	_	0.75	>	0.20	>
2-Hexanone ug/l			•		•							•	
2-Propanone ug/l			•		•		, (				:	36.0	=
4-Chlorotoluene ug/l	1 0.35	35 U	0.35	35 U	0	0.35 U	Ó	0.35 U	_	0.35	>	0.33	•
4-Methyl-2-pentanone ug/l	,		ŧ		•		•						
Benzene ug/l			•		• (		' (				=	) 8¢	Ξ
Bromobenzene			o ·		0		<b>o</b> 6		o :	6.6	<b>:</b>	30.0	=
		0.25 U	· 0		0			67.0	<b>.</b>	9 0	<b>=</b>	(F) (F)	=
Bromodichloromethane ug/l			O		<b>o</b>		•		<b>:</b>	•	> =	05.0	
i i i i i i i i i i i i i i i i i i i		20 C	Ö	0.50 U	0	0.50 U	•		<b>-</b>	0.30	>	00	
Carbon Disulfide ug/l			•		•	;	• •				=	20 0	=
Carbon Tetrachloride ug/l			Ö	0.35 U	0		•	0.35	<b>.</b>	6.5	<b>:</b>	35.0	
Chlorobenzene ug/l		0.35 U	Ö	0.35 U	0	-	0	0.35	<b>.</b>	0.35	<b>&gt;</b> :	0.33	
Chloroethane ug/		50 U	Ó		0		0		<b>.</b>	0.50	<b>&gt;</b> :	0.50	
		0.35 U	o	0.35 U	0	0.35 U	0	0.35	<b>5</b>	0.35	<b>)</b>	0.35	<b>:</b>
Dibromochloromethane ug/				0.30 U	0		D		Þ	0.30	>	vc.v	

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

	QUAL	D	ממ	D	פפ		ממם	<b>-</b>	ם מ מ	000
TB07 PC-TB07 08/10/93	RESULT Q	0.40	0.45	0.30	0.30		0.15 0.20 0.20	0.50	0.35 0.25 0.20	5 0.25 0.40
	QUAL	Þ	פפ	D	ממ		<b>a</b> D D		ככ	228
TB06 PC-TB06 08/09/93		0.40	0.45 0.50 0.58	0.30	0.30		0.56 0.20 0.20 0.06	0.06	0.06 0.25 0.20	5 0.25 0.12
. 82	RESULT									
	QUAL	D	ממ	Ω	ממ		מממ	ממ	222	2 C C C
TB05 PC-TB05 08/01/93	RESULT	0.40	- 0.45 0.50 0.39	0.30	0.30 0.55		0.15 0.20 0.20	0.50	0.3	5 0.2 0.1
	QUAL	n	ממ	Ω	n		n	מ	בכנ	) D D M
TB04 PC-TB04 07/31/93	RESULT	0.40	- 0.45 0.50 0.35	0.30	0.30 0.55	•	0.15 0.20 0.20	0.50	0.35 0.25	5 0.25 0.47
	QUAL	ב	מממ	D	ממ		<b>8</b> D	n	ממ	D B
TB03 PC-TB03 07/29/93	RESULT (	0.40	- 0.45 0.50	0.30	0.30 0.55	•	0.67 0.20 0.20	0.50 0.15	0.35	0.09 5 0.25 0.12
			ממ	5	55		DDW	ם פ	ממ	0000
2 2 5 3 2 5	OUAL	0.40	. 25 02 X		30 55		0.15 0.20 0.09	0.50 0.15	0.35 0.25	0.20 5 0.25 0.25
TB02 PC-TB02 07/27/93	RESULT	ò	0.45	0.3	0.3 0.5	•	000	,00	,00	
LOCATOR: AMPLE ID: ION DATE:	SHAIL S		ug/l l/gu l/gu	√gn √gn	Vgn Vgn	l∕gu	l/gu l/gu	l/gu l/gu l/gu	Ngu Ngu Ngu	ngu Ngu Ngu Ngu
LOCATOR: SAMPLE ID:							2 2 2 2 2 3 2 3 2 3 3 3 3 3 3 3 3 3 3 3	ne enzene ne	ě	<u>5</u>
			Dibromomeunane Ethylbenzene Methyl bromide Methyl chloride	Methylene chloride Styrene	Toluene Trichloroethylene Vinvl chloride	Xylenes (TOTAL)	8020 1,2-Dichlorobenzene 1,2-Dimethylbenzene 1,3-Dichlorobenzene	1,3-Dimethylbenzene 1,3/1,4-Dimethylbenzene	1,4-Dimethylbenzene Benzene Chlorobenzene	Ethylbenzene Methyl-t-Butyl Ether Styrene Toluene

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

14 1814 7/93	QUAL		0.15 J	U 04.	0.25 U	0.35 U	.35 U			0.30 U	.25 U		.30 U	0.30 U			0.25 U	).20 U	٠	0.40 U					•				0.40 U	0.50 U		0.35 U	0.35 U	0.50 U	0.22 J	0.30 U
TB14 PC-TB14 08/17/93	RESULT	•	Ó	Ö	0	0	0	•	•	0	0	•	0	0	0	0	9	9	•	J	•	•	•					,	_	•		•	_	,	-	-
	QUAL		ם	ם	ם	ב	כ			Þ	Þ		Þ	<b>&gt;</b>	D	Þ	Þ	<b>)</b> .		Þ									ם	ב		Þ	D	ם	•	Þ
TB13 PC-TB13 08/17/93	RESULT	•	0.35	0.40	0.25	0.35	0.35	•	•	0.30	0.25	•	0.30	0.30	0.20	0.30	0.25	0.20	•	0.40	•	•	•	•	•	•	•	•	0.40	0.50	•	0.35	0.35	0.50	0.10	0.30
	QUAL		מ	ם	ם	n	D	ם	ם	ח	D		ם	ם	ם	ם	כ	ם		ם	ם			n			D	ם	Þ	D		D	>	D	כ	D
TB12 PC-TB12 08/15/93	RESULT	0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	•	0.30	0.30	0.20	0.30	0.25	0.20	1	0.40	0.25	•	•	0.35	•	•	0.85	0.25	0.40	0.50	•	0.35	0.35	0.50	0.35	0:30
	QUAL	=	ם כ	D	Ω	n	n	ם	ם	n	ם		D	Þ	ם		Þ	Þ		ם	ב			D			Þ	n	ם	D		D	ם	D		n
TB10 PC-TB10 08/13/93		35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	,	0.30	0.30	0.20	0.20	0.25	0.20		0.40	0.25		•	0.35			0.85	0.25	0.40	0.50		0.35	0.35	0.50	0.08	0.30
8 K 1	RESULT																																			
_	QUAL	Ξ	3 5	5	5	n	ā	n	5	5	5		5	5	5	5	n	5		S	5			5			5		5	n		5		5	_	
TB09 PC-TB09 08/12/93	RESULT	35 0	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	•	0.30	0.30	0.20	0.30	0.25	0.20	•	0.40	0.25	1	1	0.35	•	•	0.85	0.25	0.40	0.50	•	0.35	0.35	0.50	0.15	0.30
	QUAL	=	ם כ	o ח	ם	ם	ם	כ	Þ	Ω	Ω		D	ב	ם	ם	n	D		Þ	ם			ב			n	Ω	D	ם		n	n	ס	ם	ם
TB08 PC-TB08 08/11/93	RESULT Q	75 0	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	•	0.30	0.30	0.20	0.30	0.25	0.20	•	0.40	0.25	•	•	0.35		•	0.85	0.25	0.40	0.50		0.35	0.35	0.50	0.35	0.30
			۔.				سع :	_	_	_	_	_	1	_	r.	V	V	7	V		<b>"</b>	7	=	<u> </u>	<b>.</b>	<u> </u>	Ψ.	ς.	F.	5	5	5	5	5	5.	l/ân
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:		l/an	119/	/an	/an	ug/l	ng/	ng'	/gn	l/gn	ng/	/gn	l∕gu	/gn	l/gu	l/gn	ng/l	ng/l	/an	ng/l	l/gu	/gn	l/gu	l/gu	l/gu	/gn	l/gn	l/gu	l/gn	/an	√8n	<b>V</b> 8π	/an	/gn	3
LO SAN LECTION						r. Silv											2	e en	٠,																	
COLI			ane	oethane	ane	ه	Sine	opane	. <u>.</u>	ene	<u>.</u>	ene	ane	ethylene	ene	ropylene	propylei	ene		/l ether	i.				none			ane	thane			ride				ethane
		see chilos	hlometh	strachlor	hloroeth	.1-Dichloroethane	.1-Dichloroethylene	.2.3-Trichloropropane	.2-Dibromoethane	,2-Dichlorobenzene	,2-Dichloroethane	.2-Dichloroethylene	,2-Dichloropropane	,2-trans-Dichloroethylene	3-Dichlorobenzene	,3-cis-Dichloropropylene	,3-trans-Dichloropropylene	,4-Dichlorobenzene	2	ethylviny	toluene	one	one	toluene	-2-penta		nzene	lorometh	chlorome	E	Carbon Disulfide	Carbon Tetrachloride	nzene	hane	Ē	Dibromochloromethane
		8010	1 1 1-Trichlomethane	1.1.2.2-Tetrachloroethane	1.1.2-Trichloroethane	1.1-Dichk	1,1-Dichle	1,2,3-Tric	1,2-Dibro	1,2-Dichl	1,2-Dichl	1.2-Dichl	1,2-Dichl	1,2-trans-	1,3-Dichl	1,3-cis-D	1,3-trans-	1,4-Dichl	2-Butanone	2-Chloroethylvinyl ether	2-Chlorotoluene	2-Hexanone	2-Propanone	4-Chlorotoluene	4-Methyl-2-pentanone	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon 1	Carbon 7	Chlorobenzene	Chloroethane	Chloroform	Dibrome

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

	JAL		ם :	<b>D</b> M		D	=	<b>=</b>	•		D	;	<b>-</b>		=	)	æ	n	ם			œ	1
TB14 PC-TB14 08/17/93	result qual		0.45	0.50		0.30	. 0	0.30	Ç.,		0.15	•	0.20		0.15	;	0.00	0.25	0.20	•	•	0.31	
	QUAL RI		D	<b>&gt;</b> "	3	Þ	:	<b>&gt;</b> :	>		Д		<b>-</b>		۵	Q		-	. =	)		۵	۵
TB13 PC-TB13 08/17/93	RESULT Q	• 1	0.45	0.50	1	0.30		0.30	0.55	ı	0.19		0.20	•	, ,	<b>6 .</b>	, c	8	0.0			9, 0	0.30
	QUAL	D	Ω	n		n	;	<b>&gt;</b> :	Þ		ū	ם	n	:	> :	3	=	> =	<b>&gt;</b>	•	3 =	٠ د	٦
TB12 PC-TB12 08/15/93	RESULT Q	0.40	0.45	0.50	0.0	0.30	•	0.30	0.55	•	0.15	0.20	0.20		0.50	0.15	7 0	6.0	0.23	0.20	0	0.25	0.12
	QUAL	Ω	n	י כ	20			ב	ם		Þ	Ω				>	:	<b>&gt;</b> :	<b>-</b>		<b>D</b> :	<b>-</b>	<b>m</b>
TB10 PC-TB10 08/13/93	RESULT Q	0.40	0.45	0.50	0.03	0.06		0.30	0.55		0.15	0.20	0.08	0.05	•	0.15	0.05	0.35	0.25	0.08	<b>.</b>	0.25	0.22
	QUAL	5	E	5 5	æ	5		5	n		=	=	)		Þ	ם		<b>-</b>	Þ	<b>-</b>	D	D	ם
TB09 PC-TB09 08/12/93	RESULT Q	0.40	- 0 45	0.50	0.24	0:30	ı	0.30	0.55	•	\$1.0	0.00	80.0	•	0.50	0.15	•	0.35	0.25	0.20	5	0.25	0.22
	QUAL	n	=	<b>)</b>	æ	D		D	Ω		=	<b>:</b>	<b>=</b>	)		n		Þ	Þ	ם	D	ר	B
TB08 PC-TB08 08/11/93	RESULT Q	0.40	, 0	0.50	0.17	0.30	,	0.30	0.55	1	9	0.13	0.20	0.05		0.15	0.05	0.35	0.25	0.20	\$	0.25	0.19
LOCATOR: SAMPLE ID: TION DATE:		ug/I	√gn	ng/l ng/l	νgα	l/gu	/gn	ug/1	ug/	√gn		l/an	l/gu	ng/l	l/an	l/an	l/gu	l/gu	ug/l	ne/J	ng/l	l/an	√gn
LOCATOR: SAMPLE ID: COLLECTION DATE:		Diheamonnelliane	Ethylbenzene	Methyl bromide	Methylene chloride	Styrene	Tetrachioroemyiene	Toluene	I neniotoeuryiene Vinyl chloride	Xylenes (TOTAL)	8020	1,2-Dichlorobenzene	1,2-Dimethylbenzene	1,3-Dichlorobenzene	1,3-Unical production	1,3/1,4-Dinemiyoone	1 4-Dimethylbenzene	Benzene	Chlombenzene	Dittellanzene	Methyl-Butyl Fiber	Succession Courses	Toluene

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

	ĄŢ	D	D	D	Þ	ב	<b>&gt;</b>	<b>&gt;</b>	<b>ס</b>	<b>D</b> :	>	;	<b>&gt;</b> ;	<b>&gt;</b> :	<b>&gt;</b> :	<b>-</b>	n	ם		<b>&gt;</b> :	<b>-</b>		;	>		:	<b>&gt;</b> :	<b>&gt;</b> :	<b>-</b> :	>	;	<b>)</b>	<b>&gt;</b>	<b>&gt;</b> :	<b>&gt;</b> ;	>
20 1820 9/93	QUAL	0.35	0.35	.40	25	0.35	0.35	.35	.35	.30	55.		0.30	0.30	20	30	0.25	0.20		0.40	0.25			0.35		,	0.83	0.20	9.40	0.50		0.35	0.35	0.50	0.35	0.30
TB20 PC-TB20 08/29/93	RESULT	Ó	0	0	0	•	•	0	•	0	0	• •		•	0	0	0	0	•		_		,			•										
	QUAL	n	D	ם	ם	D	ם	>	>	Þ	•	;	Þ	<b>-</b>	>	Þ	Þ	<b>&gt;</b> .	:	<b>)</b>	ם		1	>		;	<b>)</b>	<b>-</b> :	<b>&gt;</b>	<b>D</b>		<b>&gt;</b>	>	<b>-</b>	) כ	<b>&gt;</b>
TB19 PC-TB19 08/27/93		0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	•	0.30	0.30	0.20	0.30	0.25	0.20	• •	0.40	0.25			0.35			0.85	0.25	0.40	0.50		0.35	0.35	0.50	0.35	0.30
_ 5 %	RESULT																																			
	QUAL	D	D	D	n	ם	ם	ם	ח	ם	ם		>	D	ם	D	ם	D	1	<b>&gt;</b>	Þ			ם		1	<b>-</b>			<b>&gt;</b>					Þ	
TB18 PC-TB18 08/26/93		0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25		0.30	0.30	0.20	0.30	0.25	0.20	,	0.40	0.25	•		0.35		•	0.85	0.25	0.40	0.50	•	0.35	0.35	0.50	0.35	0.30
. <b>Z</b> S	RESULT																																			
	QUAL	Þ	Ē	ר	ם	Ω	n	D	ב	כ	ם		n	ם	ם	)	n	n		ם	D.			n			ם	ם	n	ב		)	Þ	ם	æ	n
TB17 PC-TB17 08/24/93		0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25		0.30	0.30	0.20	0.30	0.25	0.20		0.40	0.25		•	0.35		ı	0.85	0.25	0.40	0.50	•	0.35	0.35	0.50	0.0	0.30
` <b>&amp;</b> 8	RESULT																																			
	QUAL	=	=	ם מ	) D	D	n	n	ם	Ω	D		כ	n	D	ם	ם	ח		D	Þ			ם			D	D	Þ	Þ		n	ם	ם	n	Þ
TB16 PC-TB16 08/24/93		0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	,	0.30	0.30	0.20	0.30	0.25	0.20	•	0.40	0.25			0.35		ι	0.85	0.25	0.40	0.50		0.35	0.35	0.50	0.35	0.30
PC 88	RESULT																																			
	QUAL		=	=	=	כּ	n	n	ם	n	ח		n	ם	Ω	n		Ω		n	n			ם			<b>-</b>			ח		ב	ם	ב	ם	
TB15 PC-TB15 08/23/93		25.0	0.35	0.55	0.25	0.35	0.35	0.35	0.35	0.30	0.25	•	0.30	0.30	0.20	0.30	0.25	0.20	•	0.40	0.25			0.35	1	,	0.85	0.25	0.40	0.50	,	0.35	0.35	0.50	0.35	0.30
<b>E</b> 0	RESULT																																			
LOCATOR: AMPLE ID: ION DATE:	UNITS:		ug/i	l/gu	, g	l/an	l/an	ug/l	ug/]	ug/l	ng/l	ng/l	ug/l	ug/l	ug/1	, ne/	l/an	ug/I	ng/l	ug/l	ug/l	l∕gn	ng/l	l/gn	l∕gu	ug/l	ng/l	l/gu	ng/l	l∕gu	ng/l	l/gu	Văn	ug/I	ug/1	l/gu
LOCATOR: SAMPLE ID: COLLECTION DATE:	ב			na  Yim																											11	477 35				
COLLEC			anc		iatic			<u>a</u>						vlene		Jene	nvlene			her					. 6				2							¥
J			nioroeu	ocunane htoroatt	moroca	Curame	thylene	opropar	thane	enzene	thane	thylene	ropane	loroeth	enzene	ropton	horonro	enzene		iviny) et	, ne			ar.	entanon		<u> </u>	methane	rometha		lfide	chloride	ٷ			rometh
		ŀ	1,1,1,2-1 etrachioroethane	1,1,1-1 remore mane	1, 2, 2-1 ettaciilotoeu	1.2-1 ilcinotoculane	1-Dichloroethylene	2.3-Trichloropropane	2-Dibromoethane	.2-Dichlorobenzene	,2-Dichloroethane	2-Dichloroethylene	.2-Dichloropropane	.2-trans-Dichloroethylene	.3-Dichlorobenzene	3-cis-Dichloropronylene	3-trans-Dichloromonylene	.4-Dichlorobenzene	2-Butanone	2-Chloroethylvinyl ether	2-Chlorotoluene	2-Hexanone	2-Propanone	4-Chlorotoluene	4-Methyl-2-pentanone	ene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon Disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Dibromochloromethane
		8010	· - · · · ·	1,1,1	1,1,4,	7,1,1 (1-1,1)	11.	1.23-	1.2-D	1.2-D	1,2-D	1.2-D	1.2-D	1.2-tr	1.3-D	13-6	3-6-	1.4-D	2-But	2-Chi	2-CF	2-He:	2-Pro	4-Ch	4-Me	Benzene	Bron	Bron	Bron	Bron	Carb	Carb	Ch Ch	S U	Chio	Dib

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

	QUAL	Þ	<b>p</b> :	- <del>-</del>	Þ	ם ם			ם ב	<b>5</b>	ממ	בממ	) D D	D
TB20 PC-TB20 08/29/93		0.40	0.45	0.50	0.30	0.30			0.15	0.20	0.50 0.15	0.35	5 0.25	0.25
F 5 8	RESULT													
	UAL	ם	ם :	<b>9</b> 80	D	<b>&gt;</b> :	•		D:	<b>5</b>	<b>5 8</b>	מם:	) <b>)</b> =	<b>.</b>
TB19 PC-TB19 08/27/93	RESULT QUAL	0.40	0.45	0.50	0.30	0.30			0.15	0.20	0.50 0.50	0.35	0.20 5	0.23
P 7.80	RESUL													
	QUAL	n	n	D 88	ū	D:	>		D	ככ	n	סס		<b>&gt;</b> >
TB18 PC-TB18 08/26/93	RESULT (	0.40	0.45	0.50	0.30	0.30	0.55		0.15	0.20	0.50	0.35	0.20	0.25
<b>Z</b> 0	RESU													
	QUAL	n	n	D	n	D	ם		B	ככ	מכ		ממ	
TB17 PC-TB17 08/24/93	RESULT	0.40	0.45	0.50	0.30	0.30	0.55		1.70	0.20	0.50	0.35	0.20	0.25
. 8 9	RESU													
	QUAL	מ	=	<b>D</b>	Þ	D	ח		Þ	בכ	ם מ	0 =	000	2 <b>8</b>
TB16 PC-TB16 08/24/93	5	0.40	. 0.45	0.50	0.30	0.30	0.55		3.10	0.20	0.50	0.35	0.20	0.25
. 58	RESULT													
	OUAL	, <b>&gt;</b>	:	9	n		Ω		=	- =	) p		) <b>&gt;</b>	, <b>-</b> <u>-</u> <u>-</u>
TB15 PC-TB15 08/23/93		6		0.50	9 0	0.00	0.55	,	26.0	0.10	0.50	0.35	0.07	0.08
. 2 5	PESTILT													
LOCATOR: AMPLE ID: JON DATE:	TIMES:		ng/	l/gn Ng√	l/an	ug/l ug/l	√gn Ng√	√gn		l/gu L/gu	l/gu L/gu	l/gu l/gu l/gu	/an //an	l/gu L/gu
LOCATOR: SAMPLE ID:														
LOCATOR: SAMPLE ID:					e Diske Seleni					,, e	e nzene	ပ မို		k ·
·		j k	Japa L	<u> </u>	nloride	thylene	ylene 1e	TAL)		1,2-Dichlorobenzene 1,2-Dimethylbenzene	,3-Dichlorobenzene ,3-Dimethylbenzene 1,3/1,4-Dimethylbenzene	I,4-Dichlorobenzene I,4-Dimethylbenzene Benzene	ene	Methyl-t-Butyi Ether Styrene Toluene
			Dibromomethane Ethylbenzene	Methyl bromide Methyl chloride	Methylene chloride Styrene	Tetrachloroethylene Toluene	Trichloroethylene Vinyl chloride	Xylenes (TOTAL)	8020	-Dichlor -Dimethy	-Dichlor -Dimeth /1,4-Din	I,4-Dichlor I,4-Dimeth Benzene	Chlorobenzene Ethylbenzene	Methyl-t-Bu Styrene Toluene
			Dibr Ethy	Meth Meth	Methyle Styrene	Tetr Tolu	Tric Vin	Xyl	802	2,1		1,4 1,4 Be	ម្	¥ ₹ £

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

1,1,1,2-Tetrachloroethane 1,1,1,2-Tetrachloroethane 1,1,2-Tretrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethylene 1,2-Dichloroptopane 1,2-Dichloroethylene 1,2-Dichloroethylene 1,2-Dichloroethylene 1,3-Dichloroethylene 1,3-Dichloroethylene 1,3-Dichloroptopane 1,3-Dichloroptopane 1,3-Dichloroptopane 1,3-Dichloroptopane 1,3-Lians-Dichloroethylene 1,3-Lians-Dichloroptopylene 1,3-Lians-Dichloroptopylene 1,4-Dichlorobenzene 2-Butanone	SAMPLE ID: COLLECTION DATE: UNITS: hane ug/l by ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l	PC-TB22 09/08/93 09/08/93 0.35 0.35 0.35 0.35 0.35 0.35 0.35 0.3	NAI	TB23 PC-TB23 09/09/93 0.35 0.35 0.35 0.35 0.35 0.35 0.35 0.3	QUAL CU	1824 09/10/93 09/10/93 RESULT Q 0.35 0.35 0.35 0.35 0.35 0.35 0.35 0.30 0.20 0.20 0.20 0.20	I I I I I I I I I I I I I I I I I I I	TB25 PC-TB25 09/13/93 RESULT Q 0.35 0.35 0.35 0.35 0.35 0.35 0.35 0.35	NAME OF THE PROPERTY OF THE PR	PC-TB26 09/14/93 09/14/93 0.35 0.35 0.35 0.35 0.35 0.35 0.35 0.3	UAII	PC-TB27 09/15/93 09/15/93 RESULT 0.35 0.35 0.35 0.35 0.35 0.35 0.30 0.30	
2-Chloroethylvinyt ether 2-Chlorotoluene 2-Hexanone 2-Propanone 4-Chlorotoluene 4-Chlorotoluene Benzene Bromodenzene Bromodenloromethane Bromodichloromethane Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chlorobenzene Chlorobenzene Chloroform	Ligu Ligu Ligu Ligu Ligu Ligu Ligu Ligu	0.40 0.25 0.35 0.40 0.50 0.35 0.35 0.35	5 CU CU CU CO CU CO CU CO CU CO CU CU CO CU CU CO CU CU CO CU CU CO CU CU CO CU CU CO CU C	0.40 0.25 0.35 0.25 0.40 0.50 0.35 0.35		0.40 0.25 0.35 0.35 0.40 0.50 0.35 0.35	ממממ ממממ מ	0.40 0.25 0.35 0.25 0.40 0.50 0.35 0.35 0.35	מממת מממת מ	0.40 0.25 0.35 0.40 0.40 0.50 0.35 0.35 0.35			
Dibromochloromethane	l/gu	0.3	Ω 00	0.30	Ω	0.30	Ω	0.3	<b>n</b> 0	0	0.30 U		

Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

	QUAL	n	ם:	m c	n	D	Þ		D	D :	<b>D</b>	_	æ	ם	Þ		י כ	n		
TB27 PC-TB27 09/15/93	RESULT Q	0.40	0.45	0.18	0.30	0.30	0.55		0.15	0.20	0.20	0.50	0.30	0.35	0.25	0.10	sc.	0.25	0.10	
	QUAL	Ω	<b>D</b> :	<b>—</b>	D	n	ם		æ	ם	ם	Ď.	<b>m</b>		ם	ם	ם	ם י	m	
TB26 PC-TB26 09/14/93	RESULT Q	0.40	0.45	0.50	0.30	0.30	0.55	•	0.33	0.20	0.20	0.50	0.21	0.21	0.25	0.20	\$	0.25	0.19	
	QUAL	n	D	D 80	D	n	n		=	<b>&gt;</b>	æ		æ	=	<b>&gt;</b>	ם		כ		
TB25 PC-TB25 09/13/93	RESULT (	0.40	0.45	0.50	0.30	0.30	0.55	•	91.0	0.20	0.11	0.06	0.70	0.06	0.25	0.20	· <b>v</b> n	0.25	0.18	
	QUAL	Ω	n	D M	n	=	ם ס			n =	כי		æ	:	<b>&gt;</b> =	<b>=</b>	· =	) <b>)</b>	æ	
TB24 PC-TB24 09/10/93	RESULT	0.40	0.45	0.50	0.30	0.00	0.55	•		0.15	0.20	90.0	0.32	0.06	0.35	0.20	) •	0.25	0.14	
	UAL	n	ב	ם	n	:	<b>)</b>			_	n m		æ		o:	<b>-</b> :		o		
TB23 PC-TB23 09/09/93	RESULT QUAL	0.40	0.45	0.50	0.30	, ,	0.30			0.25	0.11	90:0	0.27	0.06	0.35	0.25	77.0	د 0 ک	0.14	
	OUAL	Þ	=	) D M	ם	;	<b>&gt;</b> >			m;	<u>م</u> د	1	<b>~</b>	1	n	<b>-</b> :	<b>&gt;</b> :	<b>&gt;</b> =		
TB22 PC-TB22 09/08/93	RESULT	6		0.50	0.30	•	0.30	•		0.51	0.20	0.05		0.05	J	_		\$ \$7.0	0.19	,
LOCATOR: SAMPLE ID: COLLECTION DATE:	TINITS		l/gu	l/gu L/gu	V8n	l/gn	l∕gu l∕ou	√gn		√gn	l/gu //gu	l/gu		l/gu I/gu	l/gu	l/gu	l/an	l/gu	l/gu l/ou	9
			Dibromomeurane Ethylbenzene	Methyl bromide Methyl chloride	Methylene chioride Styrene	Toluene	Trichloroethylene	Xylenes (TOTAL)	<b>\$</b> 0.00	1,2-Dichlorobenzene	1,2-Dimethylbenzene	1,3-Dichlorobenzene	1,3/1,4-Dimethylbenzene	1,4-Dichlorobenzene	Benzene	Chlorobenzene	Ethylbenzene	Methyl-t-Butyl Ether	Styrene	Toluene

## Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

TB28 PC-TB28 09/15/93	RESULT QUAL	,	0.55 0		0.35 U	0.35 U		_	0.30 U	0.25 U	•	-		0.20 U	_		0.20 U			0.25 U			0.35 U	1			-		0.50 U		0.35 U	0.35 U	0.50 U	0.35 U	0.30 U
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:			1,1,1-1 richioroemane		•	2	1,2-Dibromoethane ug/l	1,2-Dichlorobenzene ug/l		1,2-Dichloroethylene ug/l	1,2-Dichloropropane ug/l	1,2-trans-Dichloroethylene ug/l	1,3-Dichlorobenzene	ylene	1,3-trans-Dichloropropylene	1,4-Dichlorobenzene ug/l	2-Butanone ug/l	2-Chloroethylvinyl ether ug/l	2-Chlorotoluene ug/l	2-Hexanone ug/l	2-Propanone ug/l		4-Methyl-2-pentanone ug/l	Benzene ug/l	Bromobenzene ug/l	Bromochloromethane ug/l	Bromodichloromethane ug/l		Carbon Disulfide	Carbon Tetrachloride ug/l	Chlorobenzene ug/l	Chloroethane ug/l		Dibromochloromethane ug/1

## Appendix L - QC Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

TB28 PC-TB28 09/15/93	RESULT QUAL	0.40 U	 0.50 U	<b>B</b> 29.0		0.30 U	•	0.30 U	0.55 U		•	 _	0.58 B	- 050	r	0.35 UJ	0.25 UJ	0.20 UJ	s UJ	0.25 UJ	0.25 UJ
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	ane.	Methyl chloride ug/l	jde	Styrene ug/l	oroethylene	Toluene ug/l	Trichloroethylene ug/l	Vinyl chloride	Xylenes (TOTAL) ug/l		1,2-Dimethylbenzene		1.3-Dimethylbenzene			enzene		1 Ether		

Appendix L - Surface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

0-02	QUAL		Þ	Ø	n	n	n	D	ם	Þ	Þ	Þ	Þ	ח	Þ	n	Ω	n	Ω	D	ם	Þ	n	ם	ם	>	D	Þ	B	כ	Ω	ם	D	Ø	D	D	Þ	
SB6 PC-P1-SB6-SS00-02 08/24/93	RESULT		0.97	0.05	99.0	0.91	0.81	16.0	0.97	1.40	1.50	0.70	0.70	1.20	1.20	-	0.91	1.50	1.20	1.10	1.20	0.81	0.97	1.10	0.97	0.70	0.97	2.80	0.61	98.0	0.97	æ	2.70	5.90	0.86	0.86	2.80	
0-02	QUAL		'n	'n	m	n	5	5	5	5	D	'n	5	5	D	5	5	Þ	n	Þ	ם	Þ	ħ	n	5	5	D	5	m	5	5	ħ	ħ	M	ħ	5	ñ	
SB5 PC-P1-SB5-SS00-02 08/24/93	RESULT Q		0.93	2.80	0.62	0.88	0.77	0.88	0.93	1.30	1.40	19.0	29.0	1.10	1.10	0.98	0.88	1.40	1.10	-	1.10	0.77	0.93	-	0.93	19.0	0.93	2.70	0.70	0.82	0.93	2.90	2.60	4.90	0.82	0.82	2.70	
00-07	QUAL		n	B	n	ħ	5	5	'n	5	ח	5	5	5	ם	5	5	D	5	ם	n	ם	5	5	5	5	Þ	n	M	5	5	5	'n	-	5	5	5	
SB20 PC-P1-SB20-SS00-02 08/24/93	RESULT		_	0.36	0.70	0.99	0.87	0.99		1.50	1.60	92.0	97.0	1.30	1.30	1.10	0.99	1.60	1.30	1.20	1.30	0.87	-	1.20	-	0.76		m	0.63	0.93	-	3.30	2.90	5.30	0.93	0.93	m	
	QUAL		n	Ø	n	Ω	n	D	D	Þ	D	D	D	D	ם	ם	D	ם	n	ם	ם	D	D	ם	D	Þ	Ω	Ω	В	D	ם	D	Ω	8	D	D	Ω	
SB4 PC-P1-SB4-SS00-01 08/24/93	RESULT		0.98	0.26	0.65	0.92	0.82	0.92	0.98	1.40	1.50	0.71	0.71	1.20	1.20	-	0.92	1.50	1.20	1.10	1.20	0.82	0.98	1.10	0.98	0.71	0.98	2.80	0.41	0.87	0.98	33	2.70	1.80	0.87	0.87	2.80	
1000-01	QUAL		D	æ	D	Ω	D	Ω	n	n	ם	ב	n	D	מ	D	Þ	Þ	D	Þ	D	D	ב	ם	ם	ם	D	D	B	Þ	n	Þ	Ω	8	D	D	D	
SB2 PC-BG1-SB2-SS00-01 08/15/93	RESULT		1.20	0.05	0.77	1.10	96.0	1.10	1.20	1.70	1.80	0.83	0.83	1.40	1.40	1.20	1.10	1.80	1.40	1.30	1.40	0.96	1.20	1.30	1.20	0.83	1.20	3.30	0.79	-	1.20	3.60	3.20	3.40	-		3.30	
300-01	QUAL		5	B	5	5	ħ	m	'n	ā	5	5	5	5	5	5	5	5	'n	'n	n	n	<b>1</b> 5				n	ħ		5		5	5	M			'n	
SB1 PC-BG1-SB1-SS00-01 08/09/93	RESULT		96.0	0.07	0.64	06.0	0.80	06.0	96.0	1.40	1.50	69.0	0.69	1.20	1.20	-	06.0	1.50	1.20	1.10	1.20	0.80	96.0	1.10	96.0	0.69	96.0	2.80	-	0.85	96.0	33	2.70	<b>ب</b>	0.85	0.85	2.80	
LOCATOR: SAMPLE ID: 1 COLLECTION DATE:	UNITS:		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ng/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ng/kg	ug/kg	ug/kg	ug/kg	ng/kg	ug/kg	ug/kg	ug/kg	
COLLEC		8010	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethylene	1,2,3-Trichloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,2-trans-Dichloroethylene	1,3-Dichlorobenzene	1,3-cis-Dichloropropylene	1,3-trans-Dichloropropylene	1,4-Dichlorobenzene	2-Chloroethylvinyl ether	2-Chlorotoluene	4-Chlorotoluene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Вготобот	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Dibromochloromethane	Dibromomethane	Methyl bromide	Methyl chloride	Methylene chloride	Tetrachloroethylene	Trichloroethylene	Vinyl chloride	

Appendix L - Surface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

COLLECT	LOCATOR: SAMPLE ID: COLLECTION DATE:	SB1 PC-BG1-SB1-SS00-01 08/09/93	10-01	SB2 PC-BG1-SB2-SS00-01 08/15/93	-01	SB4 PC-P1-SB4-SS00-01 08/24/93	100-01	SB20 PC-P1-SB20-SS00-02 08/24/93	\$\$00-02 3	SB5 PC-P1-SB5-SS00-02 08/24/93	\$500-02 33	SB6 PC-P1-SB6-SS00-02 08/24/93	00-05
	UNITS	RESULT	QUAL	RESULT QU	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020			:	-	=	-		391	=	4.1	Þ	0.08	D
1,2-Dichlorobenzene	ug/kg	1.50	3 5	1.80	<b>&gt;</b> =	1.30	<b>=</b>	0.10	, <b>m</b>	2.	D D	0.25	Ø
1,2-Dimethylbenzene	ug/kg	08.1	3 5	7.30	) <b>=</b>	2	) <b>=</b>	2.10	ם	0.4		1.90	
1,3-Dichlorobenzene	ug/kg no/ko	3.40	3 5	4.10	) D	3.50		3.70		3.3		3.40	
1,3/1,4-Dimemyloenzene	84/8n 64/6n	06-	3 5	2.30	ם	7		2.10		1.9		0.11	
1,4-Dichiologicane Renzene	ug/kg ug/kg	1.50	5	1.80	'n	1.50	Þ	1.60		1.40		1.50	ם :
Chlorobenzene	ug/kg		'n	2.30	D	7		2.10		1.9		1.90	
Ethylbenzene	ug/kg		m	2.30	ב	7		2.10	-	1.9		1.90	
Methyl-t-Rutyl Ether	ug/kg		5	4	Ω	12		13	_	11		12	
Styrene	ug/kg		'n	1.90	Ω	1.60		1.7	n (	1.5		1.60	
Toluene	ug/kg		ħ	0.25	æ	5.80		.1.0		0.7	2 B	0.16	<b>m</b>
CLF 3/90	110/60	350	ם	420	ם	360	ם	380	Ω	340	D	350	D
1.2.4-111cmolocomons	110/60		ם	420	D	360	D	380	P	340	D	350	ם
1.2-Dichlorohenzene	ug/kg		ם	420	ב	360	D	380	n	340	ם	350	ים ב
1.4-Dichlorohenzene	ue/ke		ם	420	ב	360	n	380	Ω	340	ם	350	י ב
2.7Oxvhis/1-Chlomoronane)	ug/kg		כ	420	ם	360	D	380	Ω	340	ם	350	<b>&gt;</b>
2.4 5-Trichloronhenol	ug/kg		Þ	1000	ם	870	Ω	930	Ω	820	<b>&gt;</b>	860	<b>&gt;</b> :
2.4.6-Trichlorophenol	ug/kg		n	420	ם	360	Ω	380	ב	340	D	350	<b>)</b>
2.4-Dichlorophenol	ug/kg	350	n	420	D	360	D	380	O.	340	<b>&gt;</b> :	350	<b>:</b>
2,4-Dimethylphenol	ug/kg	350	ם	420	ח	360	Þ	380	<b>D</b>	340	<b>&gt;</b> :	920	<b>:</b>
2,4-Dinitrophenol	ug/kg		n	1000	n	870	D:	930	<b>)</b> :	820	<b>-</b> :	350	<b>-</b>
2,4-Dinitrotoluene	ug/kg		ב	420	כ	360	<b>-</b>	380	<b>&gt;</b> ;	340	<b>:</b>	055	) <b>:</b>
2,6-Dinitrotoluene	ug/kg		ם	420	ם :	360	<b>&gt;</b> :	380	<b>)</b>	340	<b>&gt;</b>	350	<b>=</b>
2-Chloronaphthalene	ug/kg		n	420	<b>)</b>	360	<b>)</b> ;	380	<b>)</b>	340	) <b>=</b>	350	=
2-Chlorophenol	ng/kg		<b>)</b>	420	<b>&gt;</b> :	360	<b>&gt;</b>	380	<b>-</b>	040	<b>=</b>	098	=
2-Methyl-4,6-Dinitrophenol	ug/kg		<b>-</b>	0001	<b>)</b>	8/0	<b>&gt;</b> ;	930	<b>:</b>	070	=	350	=
2-Methylnaphthalene	ug/kg		Þ	420	<b>D</b> ;	360	<b>&gt;</b> ;	380	<b>-</b>	340	<b>=</b>	350	=
2-Methylphenol	ug/kg		י כ	420	<b>)</b> ;	300	<b>:</b>	380	<b>:</b>	0+6	> <b>=</b>	098	=
2-Nitroaniline	ng/kg		<b>)</b>	1000	o ;	8/0	<b>&gt;</b> :	930	<b>&gt;</b>	070	=	350	=
2-Nitrophenol	ng/kg		<b>D</b> :	420	<b>)</b> ;	360	<b>&gt;</b> :	280	<b>-</b>	45.0	=	350	
3,3'-Dichlorobenzidine	ng/kg		<b>D</b>	420	<b>)</b>	300	<b>)</b> ;	280	<b>:</b>	2	=	OS &	• =
3-Nitroaniline	ng/kg		D	1000	<b>&gt;</b>	0/8	<b>)</b>	930	<b>:</b>	940	<b>-</b>	350	=
4-Bromophenyl phenyl ether	ug/kg	350	כ	420	Þ	360	>	380	>	340	>	e e	•
		000000000000000000000000000000000000000											
		-											

Appendix L - Surface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

UNITS:         RESULT         QUAL         SAG         U         380         U         340         U         360         U         380         U         340         U         360         U         360         U         360         U         360         U         360         U         380         U         340         U         360         U         3	UNITS:         RESULT         QLAL         QLA	S.	LOCATOR: SAMPLE ID: COLLECTION DATE:	SB1 PC-BG1-SB1-SS00-01 08/09/93	-SS00-01 93	SB2 PC-BG1-SB2-SS00-01 08/15/93	SS00-01	SB4 PC-P1-SB4-SS00-01 08/24/93	\$\$00-01 93	SB20 PC-P1-SB20-SS00-02 08/24/93	SS00-02	SB5 PC-P1-SB5-SS00-02 08/24/93	SS00-02 93	SB6 PC-P1-SB6-SS00-02 08/24/93	S00-02
priority electric vig/kg 350 U 420 U 360 U 380 U 340 U 30 U 30 U 340 U 350 U 350 U 350 U 340 U 350 U 3	vig/fiet         350         U         420         U         360         U         380         U         340         U         350         U         380         U         340         U         350         U         380         U         340         U         350         U         <		UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
pheny ether	priority classes         up/kg         350         U         420         U         360         U         380         U         340         U         350         U         350         U         350         U         360         U         380         U         340         U         350         U         350         U         350         U         350         U         350         U         340         U         350         U         350 <th>filono-3-methyl phenol</th> <th>119/Kg</th> <th>350</th> <th>Ω</th> <th>420</th> <th>Ω</th> <th>360</th> <th>n</th> <th>380</th> <th>D</th> <th>340</th> <th>D</th> <th>350</th> <th>Ω</th>	filono-3-methyl phenol	119/Kg	350	Ω	420	Ω	360	n	380	D	340	D	350	Ω
phenyl ether ugikg 350 U 420 U 360 U 380 U 340 U 350 U ugikg 840 U 1000 U 870 U 360 U 380 U 380 U 360	phenoly elater wiging 350 U 420 U 360 U 380 U 340 U 350 U 35	hlomaniline	ue/ke	350	Þ	420	n	360	Ω	380	n	340	n	350	n
ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         840         U         1000         U         870         U         930         U         820         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U<	ug/kg         350         U         420         U         360         U         380         U         340         U         330           ug/kg         840         U         1000         U         870         U         380         U         340         U         360           ug/kg         350         U         420         U         360         U         380         U         340         U         360           ug/kg         350         U         420         U         360         U         380         U         340         U         360           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U <t< td=""><td>hloronhenvi phenvi ether</td><td>ug/kg</td><td>350</td><td>ם</td><td>450</td><td>n</td><td>360</td><td>Ω</td><td>380</td><td>n</td><td>340</td><td>Ω</td><td>350</td><td>Þ</td></t<>	hloronhenvi phenvi ether	ug/kg	350	ם	450	n	360	Ω	380	n	340	Ω	350	Þ
ug/kg         840         U         1000         U         870         U         930         U         820         U           ug/kg         360         U         420         U         360         U         380         U         340         U         380           ug/kg         350         U         420         U         360         U         380         U         340         U         360         U         380         U         340         U         360         U         380         U         340         U         340         U         340         U         380         U         340         U         340         U         380         U         340	ug/kg         840         U         1000         U         870         U         930         U         870         U         860         U         360         U <th< td=""><td>fethylphenol</td><td>ug/kg</td><td>350</td><td>D</td><td>420</td><td>n</td><td>360</td><td>n</td><td>380</td><td>ם</td><td>340</td><td>Þ</td><td>350</td><td>D</td></th<>	fethylphenol	ug/kg	350	D	420	n	360	n	380	ם	340	Þ	350	D
ug/kg         840         U         1000         U         870         U         930         U         820         U           ug/kg         350         U         420         U         360         U         380         U         340         U         380           ee         ug/kg         350         U         420         U         360         U         380         U         340         U         360         U         380         U         340         U	ug/kg         340         U         1000         U         870         U         350         U         360         U         360         U         360         U         340         U         360         U         340         U         360         U         360         U         340         U         360         U         360         U         340         U <th< td=""><td>itrosniline</td><td>ue/kg</td><td>840</td><td>ם</td><td>1000</td><td>n</td><td>870</td><td>D</td><td>930</td><td>Þ</td><td>820</td><td>D</td><td>860</td><td>D</td></th<>	itrosniline	ue/kg	840	ם	1000	n	870	D	930	Þ	820	D	860	D
the transfer of the transfer o	ug/kg         350         U         420         U         360         U         380         U         340         U         330           neces         ug/kg         350         U         420         U         360         U         380         U         340         U         350           neces         ug/kg         350         U         420         U         360         U         380         U         340         U         350           view         ug/kg         350         U         420         U         360         U         380         U         340         U         350           view         ug/kg         350         U         420         U         360         U         340         U         350           view         ug/kg         350         U         420         U         360         U         380         U         340         U         350           bibitation         ug/kg         350         U         420         U         360         U         380         U         340         U         350           thitation         ug/kg         350         U	litrophenol	ug/kg	840	Ω	1000	D	870	ם	930	D	820	D	860	Ω
ug/kg         350         U         420         U         360         U         380         U         340         U         360         U         380         U         340         U         360         U         380         U         340         U         350         U         420         U         360         U         380         U         340         U         360         U         380         U         340         U         350         U         420         U         360         U         380         U         340         U         360         U         380         U         340         U         360         U         380         U         340         U	there	enaphthene	ug/kg	350	D	420	D	360	Ω	380	D	340	Ω	350	ח
there to the control of the control	ug/kg         350         U         420         U         360         U         380         U         340         U         350         U         420         U         360         U	enaphthylene	ug/kg	350	Ω	420	Þ	360	D	380	Ω	340	Þ	350	Ω
thraceme         ug/kg         350         U         420         U         360         U         380         U         340         U         350         U         360         U         380         U         340         U         360         U         380         U         340	ug/kg         350         U         420         U         360         U	thracene	ug/kg	350	Ω	420	n	360	D	380	n	340	Ω	350	n
ug/kg         350         U         420         U         360         U         380         U         340         U         350         U         420         U         360         U         380         U         340         U	ug/kg         350         U         420         U         360         U         380         U         340         U         350         U         350         U         350         U         350         U         350         U         360         U	nzo(a)anthracene	ue/ke	350	n	420	Ω	360	Ω	380	Ω	340	n	350	D
ug/kg         350         U         420         U         360         U         380         U         340         U         380         U         340         U         360         U         380         U         340         U         360         U         380         U         340         U         350         U         340         U         360         U         380         U         340         U         360         U         380         U         340         U         340         U         360         U         380         U         340         U	ug/kg         350         U         420         U         360         U         380         U         340         U         350         U         350         U         360         U         380         U         340         U         350         U         350         U         350         U         360         U         380         U         340         U         350         U         350         U         360         U         380         U         340         U         350         U	nzo(a)ovrene	ug/kg	350	n	420	D	360	D	380	n	340	ם	350	D
ug/kg         350         U         420         U         360         U         380         U         340         U         360         U         380         U         340         U         360         U         360         U         360         U         340         U	ug/kg         350         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         350         U <th< td=""><td>nzo(h)fluoranthene</td><td>ug/ke</td><td>350</td><td>ח</td><td>420</td><td>n</td><td>360</td><td>Ω</td><td>380</td><td>ם</td><td>340</td><td>D</td><td>350</td><td>D</td></th<>	nzo(h)fluoranthene	ug/ke	350	ח	420	n	360	Ω	380	ם	340	D	350	D
Barrier   Barr	The color of the	nzo(ehi)nervlene	ug/kg	350	Ω	420	Ω	360	D	380	n	340	n	350	Þ
e         ug/kg         350         U         420         U         360         U         380         U         340	a. gifts         350         U         420         U         360         U         380         U         340         U         350         U         350         U         350         U         350         U         360         U         380         U         340         U         350         U         <	nzo(k)fluoranthene	ue/ke		D	420	n	360	Ω	380	D	340	Ω	350	D
ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           phthalate         ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           phthalate         ug/kg         350         U         420         U         360         U         380         U         340         U           phthalate         ug/kg         350         U         420         U         360         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           conclusidence         ug/kg	ug/kg         350         U         420         U         360         U         380         U         340         U         350         U	vi benzvi ohthalate	ug/kg		D	420	Ω	360	Ω	380	Ω	340	ם	350	D
phthalate         ug/kg         350         U         420         U         360         U         380         U         340         U           phthalate         ug/kg         350         U         420         U         360         U         380         U         340         U           phthalate         ug/kg         350         U         420         U         360         U         380         U         340         U           phthalate         ug/kg         350         U         420         U         360         U         380         U         340         U           phthalate         ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           cobusadiene         ug/kg         350         U         420         U         360         U         380         U         340         U           cobusadiene         ug/kg         350         U         420         U         360         U	phthalate         ug/kg         350         U         420         U         360         U         380         U         340         U         350           phthalate         ug/kg         350         U         420         U         360         U         380         U         340         U         350           phthalate         ug/kg         350         U         420         U         360         U         380         U         340         U         350           thalltracene         ug/kg         350         U         420         U         360         U         380         U         340         U         350           thalate         ug/kg         350         U         420         U         360         U         380         U         340         U         350           thalate         ug/kg         350         U         420         U         360         U         380         U         350         U         350           thalate         ug/kg         350         U         420         U         360         U         380         U         350         U         350	bazole	ug/kg		D	420	n	360	Ω	380	Ω	340	n	350	n
phthalate         ug/kg         350         U         420         U         360         U         380         U         340         U           phthalate         ug/kg         350         U         420         U         360         U         380         U         340         U           phthalate         ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           cobustadiene         ug/kg         350         U         420         U         360         U         380         U         340         U <td>phihalate         ug/kg         350         U         420         U         360         U         380         U         340         U         350           phihalate         ug/kg         350         U         420         U         360         U         380         U         340         U         350           hyanthracene         ug/kg         350         U         420         U         360         U         340         U         350           ntailate         ug/kg         350         U         420         U         360         U         340         U         350           phthalate         ug/kg         350         U         420         U         360         U         340         U         350           ug/kg         350         U         420         U         360         U         340         U         350           cobradiate         ug/kg         350         U         420         U         360         U         340         U         350           cobradiatione         ug/kg         350         U         420         U         360         U         340         U         350</td> <td>Vsene</td> <td>ug/kg</td> <td></td> <td>Ω</td> <td>420</td> <td>Þ</td> <td>360</td> <td>D</td> <td>380</td> <td>Þ</td> <td>340</td> <td>Þ</td> <td>350</td> <td>D</td>	phihalate         ug/kg         350         U         420         U         360         U         380         U         340         U         350           phihalate         ug/kg         350         U         420         U         360         U         380         U         340         U         350           hyanthracene         ug/kg         350         U         420         U         360         U         340         U         350           ntailate         ug/kg         350         U         420         U         360         U         340         U         350           phthalate         ug/kg         350         U         420         U         360         U         340         U         350           ug/kg         350         U         420         U         360         U         340         U         350           cobradiate         ug/kg         350         U         420         U         360         U         340         U         350           cobradiatione         ug/kg         350         U         420         U         360         U         340         U         350	Vsene	ug/kg		Ω	420	Þ	360	D	380	Þ	340	Þ	350	D
ene \( \text{ug/kg} \) \( \text{ug/kg} \) \( \text{350} \) \( \text{U} \) \( \text{ug/kg} \) \( \text{350} \) \( \text{U} \) \( \text{250} \) \( \text{U} \) \	ene         ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         340         <	n-butvi phthalate	ug/kg		Ω	420	D	360	D	380	Ω	340	Þ	350	Ω
ene         ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420	ene         ug/kg         350         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         340         U         350	n-octyl phthalate	ug/kg		Ω	420	Ω	360	Ω	380	n	340	D	350	D
ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U </td <td>ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         <td< td=""><td>enzo(a.h)anthracene</td><td>ug/kg</td><td></td><td>n</td><td>420</td><td>n</td><td>360</td><td>ם</td><td>380</td><td>Ω</td><td>340</td><td>Ω</td><td>350</td><td>n</td></td<></td>	ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U <td< td=""><td>enzo(a.h)anthracene</td><td>ug/kg</td><td></td><td>n</td><td>420</td><td>n</td><td>360</td><td>ם</td><td>380</td><td>Ω</td><td>340</td><td>Ω</td><td>350</td><td>n</td></td<>	enzo(a.h)anthracene	ug/kg		n	420	n	360	ם	380	Ω	340	Ω	350	n
te ug/kg 350 U 420 U 360 U 380 U 340 U 0 ug/kg 350 U 420 U 360 U 380 U 380 U 340 U 0 ug/kg 350 U 420 U 360 U 380 U 380 U 340 U 0 ug/kg 350 U 420 U 360 U 380 U 340 U 340 U 0 ug/kg 350 U 420 U 360 U 380 U 340 U 340 U 0 ug/kg 350 U 420 U 360 U 380 U 340 U 0 ug/kg 350 U 420 U 360 U 380 U 340 U 340 U ug/kg 350 U 420 U 360 U 380 U 340 U 340 U ug/kg 350 U 420 U 360 U 380 U 340 U 340 U ug/kg 350 U 420 U 360 U 380 U 380 U 340 U ug/kg ug/kg 350 U 420 U 360 U 380 U 380 U 340 U ug/kg ug/kg 350 U 420 U 360 U 380 U 380 U 340 U ug/kg ug/kg 350 U 420 U 360 U 380 U 380 U 340 U ug/kg ug/kg 350 U 420 U 360 U 380 U 380 U 340 U ug/kg ug/kg 350 U 420 U 360 U 380 U 380 U 340 U ug/kg ug/kg 350 U 420 U 360 U 380 U 380 U 340 U ug/kg ug/kg 350 U 420 U 360 U 380 U 380 U 340 U ug/kg ug/kg 350 U 420 U 360 U 380 U 380 U 340 U ug/kg ug/kg 350 U 420 U 360 U 380 U 380 U 340 U ug/kg ug/kg 350 U 420 U 870 U 870 U 870 U 870 U	te         ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           enerty         ug/kg         350         U         420         U         360         U         380         U         340         U         350           enerty         ug/kg         350         U         420         U         360         U         380         U         340         U         350           enerty         ug/kg         350         U         420         U         360         U         380         U         340         U         350           pyprend         ug/kg         350         U         420         U         360         U         380         U         350           ug/kg         350         U         420         U         36	enzofuran	ug/kg		n	420	Ω	360	D	380	Ω	340	Ω	350	D
te,         ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ene         ug/kg         350         U         420         U         360         U         380         U         340         U           ene         ug/kg         350         U         420         U         360         U         380         U         340         U           ene         ug/kg         350         U         420         U         360         U         380         U         340         U           ene         ug/kg         350         U         420         U         360         U         380         U         340         U           pyrene         ug/kg         350         U         420         U         360         U         380         U         340         U           copylamine         ug/kg         350         U         420         U         360         U         380         U	te         ug/kg         350         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           eine         ug/kg         350         U         420         U         360         U         380         U         340         U         350           eine         ug/kg         350         U         420         U         360         U         380         U         340         U         350           e.         ug/kg         350         U         420         U         360         U         380         U         340         U         350           bysene         ug/kg         350         U         420         U         360         U         380         U         340         U         350           cylamine         ug/kg         350         U         420         U <td>thyl onthalate</td> <td>ug/kg</td> <td></td> <td>U</td> <td>420</td> <td>n</td> <td>360</td> <td>Ω</td> <td>380</td> <td>D</td> <td>340</td> <td>Ω</td> <td>350</td> <td>Ω</td>	thyl onthalate	ug/kg		U	420	n	360	Ω	380	D	340	Ω	350	Ω
ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ne         ug/kg         350         U         420         U         360         U         380         U         340         U           ntadiene         ug/kg         350         U         420         U         360         U         380         U         340         U           yramine         ug/kg         350         U         420         U         360         U         380         U         340         U           yramine         ug/kg         350         U         420         U         360         U         380         U         340         U           ng/kg         350         U         420         U         360         U         380         U         340         U           ng/kg         350         U         420         U         360         U         380         U         340         U	ug/kg         350         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ntadice         ug/kg         350         U         420         U         360         U         380         U         340         U         350           ntadice         ug/kg         350         U         420         U         360         U         380         U         340         U         350           yrene         ug/kg         350         U         420         U         360         U         380         U         340         U         350           yrlamine         ug/kg         350         U         420         U         360         U         380         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380 <th< td=""><td>nethyl phthalate</td><td>ug/kg</td><td></td><td>Ω</td><td>420</td><td>Ω</td><td>360</td><td>Ω</td><td>380</td><td>D</td><td>340</td><td>n</td><td>350</td><td>Þ</td></th<>	nethyl phthalate	ug/kg		Ω	420	Ω	360	Ω	380	D	340	n	350	Þ
ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ene         ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           uine         ug/kg         350         U         420         U         360         U         380         U         340         U           uine         uig/kg         350         U         420         U         360         U         380         U         340         U           uine <th< td=""><td>ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           end         ug/kg         350         U         420         U         360         U         380         U         340         U         350           lamine         ug/kg         350         U         420         U         360         U         380         U         340         U         350           uine         ug/kg         350         U         420         U         360         U         380         U         340         U         350           uine         ug/kg         350         U         420         U</td><td>oranthene</td><td>ug/kg</td><td></td><td>Ω</td><td>420</td><td>n</td><td>360</td><td>Ω</td><td>380</td><td>n</td><td>340</td><td>Ω</td><td>350</td><td>Þ</td></th<>	ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           end         ug/kg         350         U         420         U         360         U         380         U         340         U         350           lamine         ug/kg         350         U         420         U         360         U         380         U         340         U         350           uine         ug/kg         350         U         420         U         360         U         380         U         340         U         350           uine         ug/kg         350         U         420         U	oranthene	ug/kg		Ω	420	n	360	Ω	380	n	340	Ω	350	Þ
ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ene         ug/kg         350         U         420         U         360         U         380         U         340         U           lamine         ug/kg         350         U         420         U         360         U         380         U         340         U           uine         ug/kg         350         U         420         U         360         U         380         U         340         U           uine         ug/kg         350         U         420         U         360         U         380         U         340         U           uine         ug/kg         350         U         420         U         360         U         380         U         340         U           uine         350         U         420         U         360         U         380         U         340         U <td>ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           end         ug/kg         350         U         420         U         360         U         380         U         340         U         350           end         ug/kg         350         U         420         U         360         U         380         U         340         U         350           lamine         ug/kg         350         U         420         U         360         U         380         U         340         U         350           uirie         ug/kg         350         U         420         U         360         U         380         U         340         U         350           uirie         ug/kg         350         U         420         U         360         U         340         U         350           ug/kg         350         U         420         U         360<td>Orene</td><td>ug/kg</td><td></td><td>D</td><td>420</td><td>n</td><td>360</td><td>Ω</td><td>380</td><td>D</td><td>340</td><td>D</td><td>350</td><td>D</td></td>	ug/kg         350         U         420         U         360         U         380         U         340         U         350           ug/kg         350         U         420         U         360         U         380         U         340         U         350           end         ug/kg         350         U         420         U         360         U         380         U         340         U         350           end         ug/kg         350         U         420         U         360         U         380         U         340         U         350           lamine         ug/kg         350         U         420         U         360         U         380         U         340         U         350           uirie         ug/kg         350         U         420         U         360         U         380         U         340         U         350           uirie         ug/kg         350         U         420         U         360         U         340         U         350           ug/kg         350         U         420         U         360 <td>Orene</td> <td>ug/kg</td> <td></td> <td>D</td> <td>420</td> <td>n</td> <td>360</td> <td>Ω</td> <td>380</td> <td>D</td> <td>340</td> <td>D</td> <td>350</td> <td>D</td>	Orene	ug/kg		D	420	n	360	Ω	380	D	340	D	350	D
ug/kg         350         U         420         U         360         U         380         U         340         U           adiene         ug/kg         350         U         420         U         360         U         380         U         340         U           ene         ug/kg         350         U         420         U         360         U         380         U         340         U           lamine         ug/kg         350         U         420         U         360         U         380         U         340         U           uine         ug/kg         350         U         420         U         360         U         380         U         340         U           uine         ug/kg         350         U         420         U         360         U         380         U         340         U           uine         uing/kg         350         U         420         U         360         U         380         U         340         U           uing/kg         350         U         420         U         360         U         380         U         340 <td>ug/kg         350         U         420         U         360         U         380         U         340         U         350           adiene         ug/kg         350         U         420         U         360         U         380         U         340         U         350           ene         ug/kg         350         U         420         U         360         U         380         U         340         U         350           lamine         ug/kg         350         U         420         U         360         U         380         U         340         U         350           uine         ug/kg         350         U         420         U         360         U         380         U         340         U         350           uine         ug/kg         350         U         420         U         360         U         340         U         350           ug/kg         350         U         420         U         360         U         340         U         350           ug/kg         350         U         420         U         360         U         340<td>xachlorobenzene</td><td>ug/kg</td><td></td><td>Ω</td><td>420</td><td>Ω</td><td>360</td><td>ב</td><td>380</td><td>D</td><td>340</td><td>D</td><td>350</td><td>D</td></td>	ug/kg         350         U         420         U         360         U         380         U         340         U         350           adiene         ug/kg         350         U         420         U         360         U         380         U         340         U         350           ene         ug/kg         350         U         420         U         360         U         380         U         340         U         350           lamine         ug/kg         350         U         420         U         360         U         380         U         340         U         350           uine         ug/kg         350         U         420         U         360         U         380         U         340         U         350           uine         ug/kg         350         U         420         U         360         U         340         U         350           ug/kg         350         U         420         U         360         U         340         U         350           ug/kg         350         U         420         U         360         U         340 <td>xachlorobenzene</td> <td>ug/kg</td> <td></td> <td>Ω</td> <td>420</td> <td>Ω</td> <td>360</td> <td>ב</td> <td>380</td> <td>D</td> <td>340</td> <td>D</td> <td>350</td> <td>D</td>	xachlorobenzene	ug/kg		Ω	420	Ω	360	ב	380	D	340	D	350	D
ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         340         U           ug/kg         350         U         420         U         360         U         340         U           ug/kg         350         U         420         U         360         U         340         U           ug/kg         350         U         420         U         360         U         340         U           ug/kg         360         U         360         U         360         U         340         U	ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         340         U           ug/kg         350         U         420         U         360         U         340         U           ug/kg         360         U         380         U         340         U           ug/kg         360         U         380         U         340         U           ug/kg         40         U         420         U<	xachlorobutadiene	ug/kg		ח	420	D	360	n	380	D	340	Þ	350	D
ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         340         U           ug/kg         350         U         420         U         360         U         340         U           ug/kg         350         U         420         U         360         U         340         U </td <td>ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         340         U           ug/kg         840         U         1000         U         870         U         930         U         820         U</td> <td>xachlorocyclopentadiene</td> <td>ug/kg</td> <td></td> <td>D</td> <td>420</td> <td>Ω</td> <td>360</td> <td>ם</td> <td>380</td> <td>ם</td> <td>340</td> <td>ם</td> <td>350</td> <td>n</td>	ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         340         U           ug/kg         840         U         1000         U         870         U         930         U         820         U	xachlorocyclopentadiene	ug/kg		D	420	Ω	360	ם	380	ם	340	ם	350	n
ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         340         U           ug/kg         350         U         420         U         360         U         340         U	ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         340         U           ug/kg         350         U         420         U         360         U         340         U           ug/kg         840         U         1000         U         870         U         930         U         820         U	xachloroethane	ug/kg		Ω	420	ם	360	ם	380	Þ	340	D	350	D
ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U	ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         840         U         1000         U         870         U         930         U         820         U	leno(1,2,3-c,d)pyrene	ug/kg		Ω	420	D	360	Ω	380	D	340	n	350	Ω
ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         870         U         820         U	ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         840         U         1000         U         870         U         930         U         820         U	phorone	ug/kg		U	420	ם	360	D	380	Ω	340	D	350	D
ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         340         U           ug/kg         350         U         420         U         360         U         340         U           ug/kg         350         U         420         U         360         U         340         U           ug/kg         360         U         360         U         340         U         820         U	ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         350         U         420         U         360         U         380         U         340         U           ug/kg         840         U         1000         U         870         U         930         U         820         U	Nitrosodi-N-Propylamine	ug/kg		n	420	n	360	D	380	Þ	340		350	ם
ug/kg 350 U 420 U 360 U 380 U 340 U ug/kg 350 U 420 U 360 U 380 U 340 U ug/kg 11 1,000 U 870 U 870 U 870 U	ug/kg 350 U 420 U 360 U 380 U 340 U ug/kg 350 U 420 U 360 U 380 U 340 U u ug/kg 840 U 1000 U 870 U 930 U 820 U	Nitrosodiphenylamine	ug/kg		Ω	420	D	360	Ω	380	Ω	340		350	D
ug/kg 350 U 420 U 360 U 380 U 340 U	ug/kg 350 U 420 U 360 U 380 U 340 U cenol ug/kg 840 U 1000 U 870 U 930 U 820 U	phihalene .	na/ka		n	420	D	360	ם	380	ם	340		350	D
640 11 1000 11 870 11 830 U 820 U	tenol ug/kg 840 U 1000 U 870 U 930 U 820 U	trobenzene	ug/kg		Ω	420	D	360	Ω	380	D	340		350	D
		ntachlorophenol	ug/kg		Ω	1000	n	870	n	930	Ω	820		860	Þ

Appendix L - Surface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

20-02	QUAL	Þ	Þ	Þ	=	=	:	>										ם																			>		
SB6 PC-P1-SB6-SS00-02 08/24/93	RESULT	350	350	350	350	350	020	330		•	•	•	•	•	•	•	•	0.01		r :	•	•	•			į	•	•	•		•	1	•	•		,	0.30		
0-02	QUAL	D	Þ	ב	· <b>=</b>	=	<b>;</b>	>			ij	D		D	ď			Þ	)	=	>					D	D		ם	ח		<b>-</b>		<b>m</b>		:	<b>-</b>		
SB5 PC-P1-SB5-SS00-02 08/24/93	RESULT	340	340	340	340	340	0+0	340		•	4.60	0.41	•	0.41	0.51	•	2.90	0.0			OC. I		1.30	•	•	0.10	3.60	•	0.31	0.41	•	0.31	•	ĸ		,	6.30		
20-02	QUAL	n	ם	Þ	=	<b>=</b>	<b>&gt;</b> ;	<b>5</b>			Π	0 <b>B</b>		Þ	D			=	)	=	>		×			n	Ð		Ωſ	Þ		Π		æ					
SB20 PC-P1-SB20-SS00-02 08/24/93	RESULT	380	380	380	380	380	280	380		•	5.30	0.73	•	0.47	0.58		4 40	100	1000		1.80	•	m		1	0.12	4.20	•	0.35	0.47	•	0.35	•	4.30		;	10.40		
10-00	QUAL	D	Ω	=	) <b>=</b>	<b>&gt;</b>	<b>&gt;</b> ;	>			'n	ם		n	UL			=	>	:	>					n	Ω		Ω	n		n		0 <b>B</b>					
SB4 PC-P1-SB4-SS00-01 08/24/93	RESULT	360	360	360	360	300	360	360		•	4.90	0.43	,	0.43	0.54		1 20	10.0	10.0		1.60	•	06.0	1	•	0.11	3.80	•	0.33	0.43	•	0.33	•	2			9.60		
300-01	QUAL	n	=	=	> =	<b>:</b>	>	Þ			Π	n		n	Π	l I		=	>	;	<b>-</b>		æ			ם	Ω		ם	UL		ΩΓ		æ					
SB2 PC-BG1-SB2-SS00-01 08/15/93	RESULT	420	420	4 5	25	074	420	420			5.80	0.52	,	0.52	0.64		03.0	20.7	0.0		1.90	•	1.40	•	•	0.13	4.50	•	0.39	0.52	•	0.39	•	15.30			10.40		
	QUAL	=	=	=	<b>:</b>	<b>&gt;</b> :	>	>			ΩΓ	C	· c	>=	=	· <	>		•	0	D		-	0		D	'n	C	à	ם	0	D		8					
SB1 PC-BG1-SB1-SS00-01 08/09/93	RESULT	350	350	350	330	350	320	350		5330	4.80	0.78	14.50	0.47	0.53	270	66.4	3.20		1.30	1.60	3940	9	426	35.60	0.11	3.70	267	0.32	0.42	28.20	0.32	8.20	11.40			30		
LOCATOR: SAMPLE ID: P COLLECTION DATE:	UNITS:	*4(*)		**************************************				e ug/kg		me/ke	mg/kg	ma/kg	o allow	99 Wa/ka	9 % e	3 ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (	2 P	mg/kg	T/gu	#g/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mo/ko	me/ke	mø/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mø/kg	) •		arbons mg/kg		
[02			210	rneno	Fyrene	bis(2-Chloroethoxy)methane	bis(2-Chloroethyl) ether	bis(2-Ethylhexyl)phthalate	METALS	Aluminum	Antimony	Arcenic		Descriptions				Chromum	Chromium, Hexavalent	Cobalt	Copper	Iron	Lead	Magnesium	Manoanese	Memira	Nickel	Potagonium	Selenium	Silver	Sodium	Thallium	Vanadium	7ine		ŢPH	Total Petroleum Hydrocarbons		

Appendix L - Surface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

70-02	QUAL	Þ	æ	Ω	D:	<b>&gt;</b>	: כ	<b>&gt;</b> ;	<b>&gt;</b> :	<b>&gt;</b>	) <b>=</b>	<b>=</b>	<b>=</b>	<b>&gt;</b> =	<b>&gt;</b> ;	<b>&gt;</b> ;	<b>D</b>	Þ	<b>&gt;</b> :	Þ	ם	Þ	<b>:</b>	<b>:</b>	<b>-</b>	) <b>=</b>	<u>α</u>	D	n	n	ם		D	n	Ω	)
SB12 PC-P1-SB12-SS00-02 08/24/93	RESULT Q	1.10	0.48	0.71	-	0.89		1.10	05.1	5.1	1.0	1 30	9	1.30	21.1		1.70	1.30	1.20	1.30	0.89	1.10	1.20	1.10	1.0	3.10	0.71	0.95	1.10	3.30	e	S	0.95	0.95	3.10	
	QUAL RE	5	m	Б	E E	ñ	5	5	5	) <u> </u>	3 :	3 E	3 :	o :	3	5	D	5	ם	ם	ם	Ð	5 :	3 ;	5 =	) <u> </u>	, <b>4</b>	'n	5	5	ħ	В	n	5	Ē	3
SB11 PC-P1-SB11-SS00-02 08/24/93	RESULT Q	0.97	0.89	9.0	0.91	0.81	0.91	0.97	1.40	1.50	0.70	0.70	2.5	07.1	-	0.91	1.50	1.20	1.10	1.20	0.81	0.97	1.10	0.97	0.70	0.50	0.48	0.86	0.97	e	2.70	4.60	0.86	0.86	08.0	20:7
	QUAL	D		Ω	n	Ω	n	ם	Þ	5 =	<b>&gt;</b> ;	<b>&gt;</b> =	<b>:</b>	3 :	: כ	ם	ħ	Þ	Б	5	n	n	D :	<b>)</b>	<b>&gt;</b>	3 =	, <b>a</b>	=	· =	o D	D		n	Ξ	=	>
SB10 PC-P1-SB10-SS00-02 08/24/93	RESULT Q	0.99	2.70	99.0	0.93	0.82	0.93	0.99	1.40	1.50	17.0	17.0	07.1	1.20	-	0.93	1.50	1.20	1.10	1.20	0.82	0.99	1.10	0.99	0.71	2 00	0.83	0.88	000	3.10	2.70	7.50	0.88	0 88	3.00	06.7
	QUAL RE	Ω	ם י	n	Ω	ם	n	Þ	ם	: :	<b>)</b> ;	<b>&gt;</b>	ָ כ	5	Þ	Ω	m	Ω	'n	n	n	Ω	Þ	<b>D</b> :	<b>&gt;</b>	S =	o e	ì =	) <b>=</b>	· =	ם ח	, μα	D	· =	) =	>
SB9 PC-P1-SB9-SS00-02 08/24/93	result qu	96.0	2.90	0.64	0.00	0.80	06.0	96.0	1.40	1.50	0.09	0.69	1.20	1.20	1	0.90	1.50	1.20	1.10	1.20	0.80	96.0	1.10	96.0	0.69	0.30	0.61	0.0	90.0	? 	2.70	4.40	0.85	0.85	6.6	7.80
	QUAL RE	=	, <b>m</b>	D	n	Ω	n	D	Ω	<b>:</b>	<b>)</b>	<b>:</b>	<b>5</b>	Þ	ם	n	ם	D	n	n	Ω	ם	Ω	Ω	<b>&gt;</b> :	<b>&gt;</b> :	o #	a =	<b>=</b>	> <b>=</b>	) =	) <b>=</b>	> <b>=</b>	) <b>=</b>	o :	<b>-</b>
SB8 PC-P1-SB8-SS00-02 08/24/93	RESULT QU	1 10	0.13	0.72	-	0.00	-	1.10	1.60	1.70	8/.0	0.78	06.1	1.30	1.10	-	1.70	1.30	1.20	1.30	06.0	1.10	1.20	1.10	0.78	1.10	5.10	90.0	1.10	3.40	. "		, O	96.0	0.50	3.10
	QUAL RI	1	5 <b>~</b>	· 5	n	n	m	m	n	<b>5</b>	5	5 :	5	5	5	n	Б	n	n	'n	n	íì	n	n	5 :	3 :	3 6	۵ =	3 =	3 E	3 =	3 -	` E	3 5	3 :	5
SB7 PC-P1-SB7-SS00-02 08/24/93	RESULT QU	-	0.48	0.72	-	06.0		1.10	1.60	1.70	0.78	0.78	1.30	1.30	1.10		1.70	1.30	1.20	1.30	0.90	1.10	1.20	1.10	0.78	0.10	3.10	0.01	0.50	3.40	2	0.0	96.0	90.0	0.90	3.10
	UNITS: R		48/48 19/[0	19/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ng/kg	ug/kg	ug/kg	ug/kg	gy/gn	UB/RK	1 (K) K	84.85 100/100	9 (4) 4) 30 (1)	40 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -	8x/Sn	ug/kg
LOCATOR: SAMPLE ID: COLLECTION DATE:			morrement.	hlomethane	oethane	hane	thylene	opropane	thane	enzene	thane	ropane	,2-trans-Dichloroethylene	enzene	propriene	1,3-trans-Dichloropropylene	enzene	vinyl ether	, ou	Je	•	methane	romethane		chloride	9			romemane	nanc .a.	001	28 J	norme Autom	uiyiciic •	ylene	<u>=</u>
		8010	1,1,1,2-1 ettaciiloroeu	1 1 2 2-Tetrachlomethane	1.1.2-Trichloroethane	1.1-Dichloroethane	1.1-Dichloroethylene	1,2,3-Trichloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,2-trans-Dicl	1,3-Dichlorobenzene	1,3-cis-Dichloropropylene	1,3-trans-Diel	1.4-Dichlorobenzene	2-Chloroethylvinyl ether	2-Chlorotoluene	4-Chlorotoluene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chiorotorm	Dibromocnioromemane	Dipromomentane	Mellyl blounde	Mentyl children			Inchloroemylene	Vinyl chloride

Appendix L - Surface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

UNITS:	08/24/93	08/24/93	08/24/93	08/24/93	PC-F1-SB9-SS00-02 08/24/93	33 33	PC-P1-SB10-SS00-02 08/24/93	200-02	PC-P1-SB11-SS00-02 08/24/93	33	08/24/93	33
	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
•			-	=	-	=	1 \$0	=	0.0	8	0.08	<b>#</b>
ug/kg			1.70				1.30	=	č	~	0.0	
ug/kg	1.40		0.10	20 (	> č	• •	? .	<b>&gt;</b> =	- 190	3 =	0	. ~
ug/kg		5	0.03		<u>ح</u> . ا		7		, · ·			
ug/kg			3.90		3.4		3.30		₹ · 0		5 6	
ug/kg	2.20	'n	0.17		0.0		7	<b>D</b>	í.o	<b>x</b> ;	ξ	
ug/kg			1.70		1.5	n 0	1.50		1.5		1.1	
ug/kg			2.20		<u>و.1</u>		7		2.1		0.0	
110/40			2.20		1.9		7		1.9		2.1	
61.65 			13	n	12		12	D.	12		13	_
94,46 119,161			0.05		1.6		1.60	ם	0.0	2 B	0.0	S B
gy/gu ug/kg			0.13	<b>B</b>	0.19	9 B	5.80		0.2		0.1	
	gua r											
		;	9	:	036	=	340	=	350	Ξ	390	_
ug/kg		<b>&gt;</b> :	400	<b>)</b> :	350	<b>&gt;</b> :	966	<b>&gt;</b> =	350	) <b>=</b>	360	·
ug/kg		Þ	400	<b>)</b>	350	<b>)</b>	360	<b>&gt;</b>	350	<b>:</b>	39.0	,
ug/kg		D	400	<b>)</b>	350	<b>)</b>	360	<b>:</b>	350	<b>=</b>	390	) <b>=</b>
ug/kg		Þ	400	ם	350	<b>&gt;</b> ;	360	<b>&gt;</b> :	950	<b>:</b>	300	· =
2,2'-Oxybis(1-Chloropropane) ug/kg		Þ	400	<b>O</b>	350	<b>)</b> ;	360	<b>&gt;</b> :	350	<b>:</b>	960	=
ug/kg		n	096	Ω	820	<b>&gt;</b> :	0/8	<b>&gt;</b> :	950	<b>-</b>	25.0	> <b>=</b>
ug/kg		D	400	ב	320	<b>&gt;</b>	360	<b>&gt;</b> ;	950	<b>:</b>		> <b>=</b>
ug/kg		n	400	D	350	<b>&gt;</b>	360	<b>)</b> ;	350	<b>&gt;</b> :	966	<b>&gt;</b> =
ng/kg		Þ	400	<b>&gt;</b>	350	<b>&gt;</b>	360	<b>&gt;</b> ;	330	<b>:</b>		<b>&gt;</b> =
ug/kg		D	096	D	850	D :	870	o :	860	<b>)</b>		> <b>=</b>
ug/kg		Þ	400	Þ	350	<b>&gt;</b>	360	<b>&gt;</b> :	350	<b>-</b> :		
ug/kg		Þ	400	)	320	<b>)</b>	360	<b>&gt;</b> :	350	<b>:</b>		) <b>=</b>
ug/kg		Þ	400	Þ	350	<b>D</b> 1	360	<b>)</b> ;	350	<b>:</b>		
ng/kg		D	400	<b>&gt;</b>	350	>	360	<b>&gt;</b> ;	930	<b>:</b>		
2-Methyl-4,6-Dinitrophenol ug/kg	096	n	096	ב	820	n	820	<b>)</b>	960	<b>&gt;</b> :		<b>&gt;</b>
ug/kg	400	D	400	Ω	350	D	360	<b>&gt;</b> :	350	<b>-</b> ;		
ug/kg	400	ם	400	מ	350	Þ	360	<b>o</b> :	320	<b>&gt;</b> ;		
ug/kg	096	D	096	Þ	850	D	870	Þ	860	<b>&gt;</b>	046	
ug/kg	400	D	400	Ω	350	Ω	360	Þ	350	<b>D</b>	390	
ug/kg	400	n	400	Ω	350	Þ	360	D	320	•		
ug/ke		D	096	Ω	850	Ω	820	D	860	Þ		
4 Description of the market market		Ω	400	Ω	350	D	360	D	350	ם		

Appendix L - Surface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

LOCATOR: SAMPLE ID: COLLECTION DATE:	LOCATOR: SAMPLE ID: TION DATE:	SB7 PC-P1-SB7-SS00-02 08/24/93	\$\$00-02 33	SB8 PC-P1-SB8-SS00-02 08/24/93	\$\$00-02 33	SB9 PC-P1-SB9-SS00-02 08/24/93	\$\$00-02 93	SB10 PC-P1-SB10-SS00-02 08/24/93	SS00-02	SB11 PC-P1-SB11-SS00-02 08/24/93	SS00-02 93	SB12 PC-P1-SB12-SS00-02 08/24/93	SS00-02
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
A Chlory 2 mother whence	no/ka	400	n	400	D	350	n	360	D	350	Ω	390	n
4.Chlorogniline	9/41 11/41	400	ם ס	400	n	350	n	360	Ω	350	n	390	Ω
4-Chloropenyl phenyl ether	ug/kg	400	Þ	400	Ω	350	n	360	D	350	ח	390	Ω
4-Methylphenol	ue/ke	400	D	400	n	350	D	360	n	350	n	390	ב
4-Nitroaniline	ug/kg	096	n	096	Ω	850	Ω	870	ם	860	Þ	940	ם י
4-Nitrophenol	ug/kg	096	n	096	n	850	D	870	D	860	ם ב	940	Þ
Acenaphthene	ug/kg	400	Ω	400	n	350	Þ	360	Þ	350	Þ	390	Þ
Acenaphthylene	ug/kg	400	D	400	D	350	D	360	D	350	<b>&gt;</b> :	390	<b>:</b>
Anthracene	ug/kg	400	Þ	400	D	350	n	360	ב	350	<b>D</b> 1	390	<b>)</b> ;
Benzo(a)anthracene	ug/kg	400	n	400	D	350	ה ב	360	<b>&gt;</b> ;	350	<b>-</b> :	330	<b>&gt;</b>
Benzo(a)pyrene	ug/kg	400	D	400	D	350	<b>-</b>	360	<b>)</b>	330	<b>)</b> ;	990	<b>:</b>
Benzo(b)fluoranthene	ug/kg	400	n	400	n	350	<b>)</b>	360	<b>&gt;</b>	350	<b>&gt;</b> :	98 6 8	<b>-</b>
Benzo(ghi)perylene	ug/kg	400	ם	400	D	350	<b>D</b>	360	<b>)</b>	950	<b>)</b> ;	990	<b>:</b>
Benzo(k)fluoranthene	ug/kg	400	Ω	400	Ω	350	<b>&gt;</b>	360	<b>D</b> ;	350	<b>-</b> ;	350	<b>)</b>
Butyl benzyl phthalate	ug/kg	400	n	400	n	350	ם	360	D	350	<b>)</b>	990	<b>)</b> :
Carbazole	ug/kg	400	Ω	400	ם	350	ב	360	D	320	<b>)</b>	966	<b>)</b>
Chrysene	ug/kg	400	D	400	n	350	D	360	Þ	350	<b>&gt;</b>	390	<b>)</b> :
Di-n-butyl phthalate	ug/kg	400	n	400	n	350	Þ	360	Þ	350	<b>&gt;</b>	390	<b>)</b> ;
Di-n-octyl phthalate	ug/kg	400	D	400	Þ	350	n	360	Þ	350	<b>)</b>	390	<b>)</b> :
Dibenzo(a,h)anthracene	ug/kg	400	Ω	400	D	350	n	360	n	350	<b>:</b>	390	<b>)</b> ;
Dibenzofuran	ug/kg		Ω	400	Ω	350	D.	360	<b>)</b>	350	<b>:</b>	390	<b>&gt;</b> :
Diethyl phthalate	ug/kg		Ω	400	Ω	350	Ω	360	D :	350	<b>&gt;</b> :	390	<b>)</b> :
Dimethyl phthalate	ug/kg		Ω	400	D	350	ם כ	360	<b>&gt;</b> :	350	<b>&gt;</b> :	390	<b>&gt;</b> =
Fluoranthene	ug/kg		n	400	n	350	n	360	<b>)</b> ;	350	<b>)</b> :	390	<b>:</b>
Fluorene	ug/kg		D	400	D	350	<b>&gt;</b> :	360	<b>&gt;</b> ;	350	<b>)</b> :	990	<b>-</b> :
Hexachlorobenzene	ug/kg		ם	400	D	350	Þ	360	<b>&gt;</b> :	350	<b>-</b> :	065	<b>-</b>
Hexachlorobutadiene	ug/kg		D	400	Þ	350	Ω	360	<b>)</b>	350	<b>&gt;</b> :	390	<b>;</b>
Hexachlorocyclopentadiene	ug/kg	400	D	400	D	350	Þ	360	<b>D</b>	350	<b>)</b>	390	<b>)</b>
Hexachloroethane	ug/kg	400	D	400	D	350	n	360	כ	350	<b>&gt;</b>	390	<b>)</b> ;
Indeno(1.2.3-c.d)nyrene	ug/kg	400	Þ	400	Ω	350	Ω	360	D	350	<b>=</b>	390	<b>)</b>
Isophorone	ug/kg		n	400	Ω	350	D	360	n	350	D	390	D :
N-Nitrosodi-N-Propylamine	ug/kg	400	n	400	Ω	350	n	360	D	350	Þ	390	D,
N-Nitrosodinhenvlamine	ug/kg	400	n	400	D	350	n	360	D	350	ם	390	D
Nanhthalene	ue/ke		n	400	Ω	350	D	360	D	350	D	390	n
Nitrohenzene	no/ko		D	400	n	350	D	360	D	350	D	390	D
Pentachlomuhenol	10/kg		Ω	096	Ω	850	D	870	Ω	860	n	940	Ω
	D 												

Appendix L - Surface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

Appendix L - Surface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

SB10 PC-MP2-SB10-SS00-01 PC-CG3-SB11-SS00-02 09/13/93 08/26/93	RESULT QUAL			2.80 U		-			0.95 U					1.20 U	1.20 U	1 U	O.89 U	1.50 U	1.20 U	1.10 U	1.20 U	O.79 U								0.84 U			2.60 U	4.20 J	0.84 U	0.84 U	2.70 U
-\$\$00-01 PC-	QUAL R				D f	n c		n c			5	D 8	n 8	n o	n c	n 6		m o	<b>n</b> 0			m 8	D 4	n			_	<b>n</b> 0		3 O	4 U	<b>n</b> 0	_	<b>8</b> 01		D E	n 0,
SB10 PC-MP2-SB10-S 09/13/93	RESULT		0.94	2.80	0.63	0.89	0.78	0.89	0.94	1.40	1.50	99.0	0.68	1.10	1.10	0.99	0.89	1.50	1.10	-	1.10	0.78	0.94	-	0.94	99.0	0.94	2.70	0.19	0.83	0.94	2.90	2.60	3.8	8.0	0.83	2.70
	QUAL		ם	<b>m</b>	n	<b>D</b>	Þ	D	n		D	D 1	n	n (	n (	n	n	Ω (	n (	n	n (	Ω 8		Þ		<b>⊃</b>		<b>n</b> 0		3 C		<b>n</b> 0	<b>n</b> 0	0 38	3 U	3 C	n 0
SB8 PC-MP2-SB8-SS00-02 08/15/93	RESULT		0.94	0.20	0.63	0.89	0.78	0.89	0.94	1.40	1.50	99.0	89.0	1.10	1.10	0.99	0.89	1.50	1.10	-	1.10	0.78	0.94	-	0.94	99.0	0.94	2.70	0.97	0.83	0.94	2.90	2.60	1.30	0.83	0.83	2.70
500-02	QUAL		Þ	æ	Ω	D	D	D	Þ		n	n	n	n	Ω	n	ח	Ω	D	n	ב	ņ		D	Þ	ם		D (		n 1		Ω (	D (	) B	D 1	n t	n (
SB7 PC-MP2-SB7-SS00-02 08/15/93	RESULT		0.95	0.22	0.63	0.89	0.79	0.89	0.95	1.40	1.50	0.68	0.68	1.20	1.20	-	0.89	1.50	1.20	1.10	1.20	0.79	0.95	1.10	0.95	0.68	0.95	2.70	0.58	0.84	0.95	2.90	2.60	4.40	0.84	0.84	2.70
	QUAL		D	n	ם	n	n	Ω	D	D	ħ	n	ם	n	Ð	n	n	n	n	n		n	D	n	D	Ω	ħ	n	89	Ω	n	n	n		n		D
SB6 PC-MP2-SB6-SS00-02 08/15/93	RESULT		0.98	2.90	0.65	0.92	0.82	0.92	0.98	1.40	1.50	0.71	0.71	1.20	1.20	_	0.92	1.50	1.20	1.10	1.20	0.82	0.98	1.10	0.98	0.71	0.98	2.80	0.55	0.87	86.0	3	2.70	17	0.87	0.87	2.80
	QUAL		D	n	n	Ω	n	Ω	ח	D	n	n	D	ם	n	n	D	n	n	n	Ω	n	n	n	D	D	D	ר		n	ר	D	n	æ			Ω
SB13 PC-P1-SB13-SS00-02 08/24/93	RESULT		-	e	0.67	0.94	0.83	0.94		1.40	1.60	0.72	0.72	1.20	1.20	1.10	0.94	1.60	1.20	1.10	1.20	0.83		1.10		0.72	1	2.90	0.31	0.89	1	3.10	2.80	1.20	0.89	0.89	2.90
LOCATOR: SAMPLE ID: F COLLECTION DATE:	UNITS:		ng/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ng/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
COLLECT		8010	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethylene	1,2,3-Trichloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,2-trans-Dichloroethylene	1,3-Dichlorobenzene	I,3-cis-Dichloropropylene	1,3-trans-Dichloropropylene	1,4-Dichlorobenzene	2-Chloroethylvinyl ether	2-Chlorotoluene	4-Chlorotoluene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Вготоботи	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Dibromochloromethane	Dibromomethane	Methyl bromide	Methyl chloride	Methylene chloride	Tetrachloroethylene	Trichloroethylene	Vinyl chloride

Appendix L - Surface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

LOCATOR: SAMPLE ID: COLLECTION DATE:	LOCATOR: SAMPLE ID: TION DATE:	SB13 PC-P1-SB13-SS00-02 08/24/93		SB6 PC-MP2-SB6-SS00-02 08/15/93	SB7 PC-MP2-SB7-SS00-02 08/15/93	SB8 PC-MP2-SB8-SS00-02 08/15/93	SB10 PC-MP2-SB10-S 09/13/93	SS00-01	SB10 PC-MP2-SB10-SS00-01 PC-CG3-SB11-SS00-02 09/13/93 08/26/93	S00-02
Ž.	UNITS:	RESULT QUAL		RESULT QUAL	RESULT QUAL	RESULT QUAL	RESULT	QUAL	RESULT	QUAL
8020	#4/F#	1,60	Ħ	11.50	U 05.1	U. 05.1	1.50	5	1.50	D
1,2-Dimethylbenzene	ey/sn	1.30	) <b>)</b>	1.30 U	1.30 U	1.30 U	1.30		1.30	n
1.3-Dichlorobenzene	ug/kg	7	o D	2 U	1.90 U	1.90 U	1.90	5	1.90	Ω
1,3/1,4-Dimethylbenzene	ug/kg	3.60	n				3.30		3.40	D
1,4-Dichlorobenzene	ug/kg	2	Ω	0.26 B	U 06.1	1.90 U	1.90		0.15	<b>-</b>
Benzene	ug/kg	1.60	Ω				1.50		1.50	<b>&gt;</b>
Chlorobenzene	ug/kg	7	Ω				1.90		1.90	)
Ethylbenzene	ug/kg	2	n	2 U	U 06.1	1.90 U	1.90		1.90	Þ
Methyl-t-Butyl Ether	ug/kg	12	n				=======================================		12	D
Styrene	ug/kg	1.70	Ω	1.60 U	_	1.60 U	1.6		1.60	D
Toluene	ug/kg	5.90	ņ	0.28 B	0.23 B		5.5(		0.12	m
CLP 3/90		;	:	;			7,40	=	270	Ξ
1,2,4-Trichlorobenzene	ug/kg	360	o :	360 0.0	350 0	340	340	> =	340	> <b>=</b>
1,2-Dichlorobenzene	ug/kg	360	<b>)</b>	360 U	350		940	<b>:</b>	240	> =
1,3-Dichlorobenzene	ng/kg	360	<b>D</b> ;	360 U		- •	340	<b>&gt;</b> :	950	<b>:</b>
1,4-Dichlorobenzene	ng/kg	360	>	360			340 340	<b>:</b>	0.50	<b>)</b>
2,2'-Oxybis(I-Chloropropane)	ug/kg	360	⊃				340	<b>&gt;</b> ;	340	<b>&gt;</b> :
2,4,5-Trichlorophenol	ug/kg		ב כ				830	<b>-</b> :	830	<b>&gt;</b> :
2,4,6-Trichlorophenol	ug/kg		<b>&gt;</b> :	360 U	350 U		340	<b>-</b> :	340	<b>&gt; :</b>
2,4-Dichlorophenol	ug/kg	360	<b>)</b>				340	<b>&gt;</b> :	340	<b>&gt;</b>
2,4-Dimethylphenol	ug/kg	360	<b>D</b> ;				340	<b>&gt;</b>	250	> =
2,4-Dinitrophenol	ug/kg	880 880	<b>:</b>	870 U		820 078	340	<b>&gt;</b> =	830	> =
2,4 Dinitrotoluene	ug/kg	360	<b>-</b> :	360	350 0	340 0	340	<b>=</b>	£ 6	=
2,0-Dimitololuene	118/Kg		<b>-</b>		350		340	<b>D</b>	340	כי
	94/8n 110/kg		) =	n 098		340 U	340	Þ	340	D
2-Methyl-4 6-Dinitrophenol	119/kg		n				830	D	830	D
2-Methylnanhthalene	ue/ke		n				340	Ω	340	P
2-Methylphenol	ug/kg		ב	360 U	350 U		340	n	340	D
2-Nitroaniline	ug/kg		D	N 028	840 U		830	n	830	)
2-Nitrophenol	ug/kg		ם		350 U		340	Þ	340	Ω
3.3'-Dichlorobenzidine	ug/kg		n	360 U	350 U		340	n	340	<b>n</b>
3-Nitroaniline	ug/kg		Ω	870 U	840 U	820 U	830	Ω	830	Ω
4-Bromonhenyl phenyl ether	ug/kg	360	ם				340	D	340	Þ
· ·	)									

Appendix L - Surface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

SB11 PC-CG3-SB11-SS00-02 08/26/93	ULT QUAL	340 U	340 U	340 U	340 U	830 U	830 O	_	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	830 U
	QUAL RESULT	Ω	Ω	Ω	D	Ω	Ω	Þ	D	n	D	n	D	D	D	n	ם	Ω	D	Ω	n	D	ם	ם	D	D	Þ	Þ	Þ	Þ	n	Þ	ם	D	D	n	D
SB10 PC-MP2-SB10-SS00-01 09/13/93	RESULT Q	340	340	340	340	830	830	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	830
	QUAL	n	n	ם	Ω	Ω	n	ם	n	ם	n	D	n	Þ	D	D	D	Ω	n	Ω	Ω	Ω	Ω	ם	D	ם	ם	D	Þ	n	n	n	ם	Ω	מ	D	Þ
SB8 PC-MP2-SB8-SS00-02 08/15/93	RESULT	340	340	340	340	820	820	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	820
-SS00-02 33	QUAL	D	D	Ω	Ω	D	Ω	Ω	Ω	Ω	Ω	n	n	ם	D	n	n	Ω	Ω	Ω	Ω	Ω	Ω	Ω	n	<b>&gt;</b>	n	D	n	ם	Ω	n	Ω	n	Ω	n	n
SB7 PC-MP2-SB7-SS00-02 08/15/93	RESULT	350	350	350	350	840	840	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	840
SS00-02	QUAL	D	ם	n	Ω	n	n	Þ	Þ	n	Ω	n	•	n	•	n	n	ם	n	m	m	Ω	Ω	Ω		Ω	n	ם	D	•	n	D	D	D	D	D	Ω
SB6 PC-MP2-SB6-SS00-02 08/15/93	RESULT	360	360	360	360	870	870	360	360	360	360	360	52	360	52	360	360	360	360	360	360	360	360	360	51	360	360	360	360	360	360	360	360	360	360	360	870
SS00-02 33	QUAL	D	D	n	Ω	Ω	n	Ω	n	ם	ם	D	D	D	D	Ω	Ω	Ω	D	Ω	n	Ω	n	Ω	Ω	Ω	D	D	Ω	Ω	Ω	Ω	Ω	D	Ω	D	Ω
SB13 PC-P1-SB13-SS00-02 08/24/93	RESULT	360	360	360	360	880	880	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	880
LOCATOR: SAMPLE ID: TION DATE:	UNITS:	ue/ke	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
LOCATOR: SAMPLE ID: COLLECTION DATE:		4-Chlore-3-methyl phenol	4-Chlowaniline	4-Chlorophenyl phenyl ether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(ghi)pervlene	Benzo(k)fluoranthene	Butyl benzyl phthalate	Carbazole	Chrysene	Di-n-butyl phthalate	Di-n-octyl phthalate	Dibenzo(a.h)anthracene	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-c,d)pyrene	Isophorone	N-Nitrosodi-N-Propylamine	N-Nitrosodiphenylamine	Naphthalene	Nitrobenzene	Pentachlorophenol

Appendix L - Surface Soil Analytical Results from Remedial Investigation Alpena, MI

LOCATOR: SAMPLE ID: COLLECTION DATE:		SB13 PC-P1-SB13-SS00-02 08/24/93	300-02	SB6 PC-MP2-SB6-SS00-02 08/15/93	200-02	SB7 PC-MP2-SB7-SS00-02 08/15/93	\$\$00-02 3	SB8 PC-MP2-SB8-SS00-02 08/15/93		SB10 SB11 PC-MP2-SB10-SS00-01 PC-CG3-SB11-SS00-02 09/13/93 08/26/93	-SS00-01 33	SB11 PC-CG3-SB11-S 08/26/93	1-SS00-0	20
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	긤
		360	=	360	n	350	n	340	Ω	340	Þ	340		Þ
rnenantinene L	<b>3</b> 2 .	360	=	360	=	350	Ω	340	n	340	D	340	_	Þ
Phenol	agy/gn	360	=	8	)	350	ם	340	Þ	340	D	340		n
Fyrene	29 . 1967 1978	96	) =	360	=	350	Ξ	340	Ω	340	Ω	340	_	Þ
bis(2-Chloroethoxy)memane	ug/kg	360	> =	360	=	350	· =	340	D	340	n	340	_	ם
bis(2-Chloroethy1) ether	ug/kg	900	٠ د	96		350	· =	, K	1	340	=	340	_	D
bis(2-Ethylhexyl)phthalate	ug/kg	42	7	360	>	000	•	2		}	•			
WETALS														
A Limiting	ay/om	•		•		٠		•		•		•		
Aluminum	91/911	v	111	4.90	nr	4.70	Th.	4.70	UL	4.70	O UL	4.70		Ωľ
Anumony	mo/ko	0.55	3	1.90		0.69		2.50	8	1.10	0	0.42		Þ
Alsonic	6 P		>	•		•		•		•		•		
Barlum	8 // F	0 44	=	0.43	Ω	0.42	D	0.42		0.42	2 U	0.42		Þ
Dety.llum.	mo/ko	0.55	) E	0.54	nr	0.53	_	0.52	_	0.52		0		ΛΓ
	mo/ko		)		i	1		•		•		1		
	a ou	3 80		<b>v</b> :		1.90	_	10.20		3.60	0	2.		
Chromium Hexavalent	l/am	0.01	n	0.01	D	10.0	D	0.01	n	0.01	1 C	0.0		∍
	mg/kg	•		•		1		•		•				;
Copper	mg/kg	1.70	D	5.10		1.60	D (	4.70	_	3.30	e e	09.1		>
Iron	mg/kg			•	•	•		' *		· -	-	י ה	3 80	
Lead	mg/kg	2.50		31	_	J.4(	<b>x</b> i	11.80	20	06.1		•	2	
Magnesium	mg/kg	•		•		1		•		1				
Manganese	mg/kg	•		•		• 6		' 6		' 6		· C	- 11	=
Mercury	mg/kg	0.11	י כ	0.11	o :	0.11	o :	0.10	<b>.</b>	3.70	2 2		3.70	· =
Nickel	mg/kg	3.90	Þ	3.80		3.70		0.10 0.10		י		<b>i</b> !	·	,
Potassium	mg/kg	' (		' '	11.1	- 0	=	0.31	=	0.31	II UL	0	32	UL
Selenium	mg/kg	0.33		0.32			-	0.40	-	0.42		Ö		ח
Silver	mg/kg	0.44	<b>&gt;</b>	0.43	<b>1</b> 0	74.0		7.		; •		•	!	
Sodium	mg/kg	•				٠ (		, t	0 21	111	_	0.32 111		
Thallium	mg/kg	0.33	כ	0.32	חה	0.32	70 7	¥	Š		5			
Vanadium	mg/kg	t		•		•		' č		000	5	۰		~
Zinc	mg/kg	4.10	m	20.30	<b>m</b>	9.50	9	71.70	20	<u>.</u>	3	`		3
								,						
ТРН	•	•		00.0		1, 1,		45 80	_	2520		18		
Total Petroleum Hydrocarbons	mg/kg	23.90	_	0717		17.1	>	r c						

Appendix L - Surface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

Appendix L - Surface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

300-02	QUAL	Ω	D	n	=	=	> =	<b>=</b>	> =	=	> =	9 6	20	Þ	ם	Þ	n	D	ם	Þ	n	n	n	n	ם	ם	Þ	ם	<b>)</b>	<b>-</b>	כ	Þ	ם	Þ	Þ	
SB7 PC-HN8-SB7-SS00-02 08/15/93	RESULT	1.50	1.30	1.90	3.40	-	1.50	200	1.90	2.5	71	1.00	0.23	350	350	350	350	350	840	350	350	350	840	350	350	350	350	840	350	350	840	320	350	840	350	
200-03	QUAL	ם	ם	=	=	) <b>:</b>	<b>&gt;</b>	<b>:</b>	<b>&gt;</b>	<b>:</b>	<b>&gt;</b> :	<b>&gt;</b> :	>	ח	n	ם	ח	n	ם ס	כ	D	n	D	Þ	ם	ם	n	כ	Þ	D	Þ	Þ	n	Þ	n	
SB6 PC-HN8-SB6-SS00-02 08/15/93	RESULT	1.50	1.30	1 90	3 30	3.30	96.	00:	9. <del>.</del>	96.1 1.30		00.1	5.50	340	340	340	340	340	820	340	340	340	820	340	340	340	340	820	340	340	820	340	340	820	340	!
S00-02	QUAL	-	~ ~			<b>:</b>			<b>-</b> :			_	m	D	D	Ω	=	=	=	) <b>)</b>	כ	ב	ב	n	n	Ω	D	D	ם	Þ	Þ	D	n	Ω	Ω	)
SB4 PC-HN8-SB4-SS00-02 08/13/93	RESULT	0 04	0.21	1 00	1.90	5.50	0.26	0.00	1.90		2.40	1.60	0.12	340	340	340	340	340	830	340	340	340	830	340	340	340	340	830	340	340	830	340	340	830	340	2
S00-02	QUAL			Ξ	<b>&gt;</b> ‡	<b>-</b>	m i	<b>x</b> ;	<b>:</b>	<b>)</b>	<b>D</b>	<b>x</b>		n	D	=	=	=	<b>=</b>	=	) D	ם ס	ם	n	n	Ω	D	<b>&gt;</b>	Þ	ח	Ω	Þ	ח	ח	=	•
LOCATOR: SB20 SB12 SB13 SAMPLE ID: PC-CG3-SB20-SS00-02 PC-CG3-SB13-SS00-02 TION DATE: 08/26/93 08/26/93	RESULT	0.07	81.0	-	1.90	3.30	0.25	0.02	1.90	06.I	11	0.08	0.18	340	340	340	340	340	0±6	340	340	340	820	340	340	340	340	820	340	340	820	340	340	820	340	3
\$500-02	QUAL	E	3 =		3 :								5	n	ם ח	=	<b>=</b>	<b>:</b>	<b>&gt;</b> =	<b>=</b>	=	ם ס	) )	n	Ω	n	Þ	ם	Ω	n	Ω	n	n	=	=	•
SB12 PC-CG3-SB12-S 08/26/93	RESULT	5	1.30	00.1	06.1	3.40	1.90	1.50	1.90	1.90	12	1.60	5.60	340	340	940	340	040	340	340	340	340	830	340	340	340	340	830	340	340	830	340	340	830	340	er S
200-03	QUAL	=	<b>&gt;</b>	<b>&gt;</b> ;	<b>)</b>	D	n	ם	ם	D	ם	>	Ω	Ξ	=	<b>=</b>	> =	<b>:</b>	<b>)</b> :	<b>-</b>	=	=	) <b>=</b>	ם ס	D	כי	Ω	Þ	Ω	Ω	ם	n	· =	=	) <b>=</b>	>
SB20 PC-CG3-SB20-S 08/26/93	RESULT	7	4.50	06.1	1.90	3.40	1.90	1.50	1.90	1.90	12	1.60	5.60	350	350	000	055	920	350	840	350	350	840	350	350	350	350	840	350	350	840	350				000
LOCATOR: AMPLE ID: I ION DATE:	UNITS:	5	ng/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	4/01	84/8m	ug/ng	gw/gn	ug/kg "	ug/kg	ug/kg	gy/gu	ng/kg na/l-o	ug/kg na/ko	110/kg	110/kg	ug/kg	110/kg	ug/kg	ug/kg	ug/kg	us/ke	110/kg	94/81	18		ng/kg
LOCATOR: SAMPLE ID: COLLECTION DATE:		8020	1,2-Dichlorobenzene	1,2-Dimethylbenzene	1,3-Dichlorobenzene	1,3/1,4-Dimethylbenzene	1,4-Dichlorobenzene	Benzene	Chlorobenzene	Ethylbenzene	Methyl-t-Butyl Ether	Styrene	Toluene	1 2 4 T.:: L. C.:: L.	1,2,4-1 nemotopetizene	1,2-Dichlorocenzene	I,3-Dichlorobenzene	1,4-Dichlorobenzene	2,2'-Oxybis(1-Chloropropane)	2,4,5-Trichlorophenol	2,4,0-1 richlorophenol	2,4-Dichlorophenol	2,4-Dimemylphonoi	2 4 Dinitotolijene	2 K-Dinitratolliene	2-Chloronaphthalene	2. Chlorophenol	2-Methyl-4:6-Dinitrophenol	2-Methylpanhthalene	2-Methylohenol	2-Nitroaniline	J. Nitronham	1 2. Dishlombandida	3.3 -Demolovenzione	Service of the servic	4-Bromophenyi pnenyi emer

Appendix L - Surface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

SB7 02 PC-HN8-SB7-SS00-02 08/15/93	AL RESULT QUAL	11 350 11		0 000 0	U 350 U	U 350 U	U 840 U	U 840 U	U 350 U	U 350 U	U 350 U	_	U 350 U	350 U	U 350 U	U 350 U	U 350 U	U 350 U	350 U	U 350 U	U 350 U	U 350 U	U 350 U	U 350 U		U 350 U		U 350 U				350	U 350 U		U 350 U	U 350 U	U 350 U	11 640 11
SB6 PC-HN8-SB6-SS00-02 08/15/93	RESULT QUAL	340	2	340	340	340	820	820	340	340	340	340	340	48	340	340	340	340	74	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	000
SB4 PC-HN8-SB4-SS00-02 08/13/93	RESULT QUAL	340 11	0+6	340 O	340 U	340 U	830 U	830 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U		340 U	340 U	340 U	340 U	340 U	340 U	
	RESULT QUAL	11	0 0	340 U	340 U	340 U	820 U	820 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U			340 U		340 U	340 U	340 U	340 U	340 U	340 U	340 U	340	
LOCATOR: SB20 SB12 SB13 SAMPLE ID: PC-CG3-SB20-SS00-02 PC-CG3-SB13-SS00-02 TION DATE: 08/26/93 08/26/93	RESULT QUAL	076	340	340 U	340 U	340 U	830 U	830 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 U	340 11	
SB20 -CG3-SB20-SS00-02 1 08/26/93	RESULT QUAL			350 U	350 U			840 U			92	290	170	430	140	430	350 U	9	250	350 U	350 U	350 U	350 U	350 U	350 U	640	39	350 U	350 U	350 U	350 U	160	350 U	350 U	350 U			
LOCATOR: SAMPLE ID: PC- COLLECTION DATE:	UNITS: R		ug/kg	ug/kg			ng/kg	ns/ks	ug/kg	na/ka	ay/an	no/ko	ug/kg	119/kg	119/kg	no/ko		us/kg	ug/kg	ay/an	ug/kg	ug/kg	ug/kg	ng/kg	ug/kg	ug/kg	ng/kg	ug/kg	ug/kg	ne ug/kg		ug/kg	ug/kg			119/kg	A. 6.	X X X Y
COL			4-Chloro-3-methyl phenol	4-Chloroaniline	4-Chlorophenyl phenyl ether	4-Methylphenol	4-Nitroaniline	4-Nitronhenol	Acenaphthene	Acenaphilylene	Anthracene	Benzo(s)anthracene	Benzo(a) pyrene	Renzo(h)fluoranihene	Renzo(ohi)nervlene	Benzo(k)fluoranthene	Birtyl henzyl nhthalate	Carbazole	Chrysene	Di-n-butyl phthalate	Di-n-octyl phthalate	Dibenzo(a.h)anthracene	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1.2,3-c,d)pyrene	Isophorone	N-Nitrosodi-N-Propylamine	N-Nitrosodinhenvlamine	Nanhthalene	Minches	MITOURING

Appendix L - Surface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

ug/kg         440         OLAL         RESULT         QIAL         QIAL         QIAL           ug/kg         440         340         U         340         U         340         U           ug/kg         350         U         340         U         340         U         U           ug/kg         350         U         340         U         340         U	LOCATOR: SAMPLE ID: COLLECTION DATE:	LOCATOR:         SB20         SB12         SB13           SAMPLE ID:         PC-CG3-SB20-SS00-02         PC-CG3-SB13-SS00-02           TION DATE:         08/26/93         08/26/93	-SS00-02 13	SB12 PC-CG3-SB12-S 08/26/93	SS00-02	SB13 PC-CG3-SB13-S 08/26/93		SB4 PC-HN8-SB4-SS00-02 08/13/93	SS00-02 3	SB6 PC-HN8-SB6-SS00-02 08/15/93	SS00-02	SB7 PC-HN8-SB7-SS00-02 08/15/93	SS00-02	
ug/kg         440         340         U         340         U         340         U         340         U         U         340         U         U         340	TIND		QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	
ug/kg         350         U         340         U         340         U         340         U         U         340				340	n	340	Ω	340	Þ	340	n	350	n	
ug/kg         420         340         U         340         U         340         U         U         340         U         470         U				340	ם ס	340	n	340	n	340	ם	350	Þ	
ug/kg         350         U         340         U	- Sec. 1		)	340	כי	340	D	340	n	340	D	350	Þ	
mg/kg 350 U 340 U 340 U 340 U 340 U mg/kg 150 U 142 U 6.42 U 6.60 ( mg/kg 6.60 U 1.50 U 6.01 U 6.01 U 6.52 U 6.52 U 6.60 ( mg/kg 7.70 U 1.50 U 6.50 U			1	340	D	340	D	340	ם	340	Þ	350	D	_
mg/kg 350 U 340 U			ם ס	340	ב	340	D	340	ם	340	D	350	ב	_
mg/kg	9		ם	340	Ω	340	D	340	n	25		350	Þ	_
mg/kg - 1.50														
mg/kg 1.50 UL 4.70 UL 4.70 UL mg/kg 1.50								3360		,		•		
mg/kg 1.50 0.L 4.70 0.L 4.70 0.L mg/kg 1.50 0.42 0 0.42 0 0.660 ( mg/kg 0.42 0 0.42 0 0.42 0 0.41 1 mg/kg 7 7 2.40 5.5 mg/kg	l/gm			1 .		, ,		3350		, <b>,</b>	6	4 80	=	
mg/kg 1.50 0.42 U 0.00 C mg/kg 0.43 UL 0.53 UL 0.51 UL 0.52 Ul mg/kg 0.53 UL 0.53 UL 0.52 Ul 0.51 UL 0.52 Ul mg/kg 1 0.01 U U U 0.01 U U U 0.01 U U U U U U U U U U U U U U U U U U U	//gm			4.70		07.4		5.4 5.6	)	01.0		690		
mg/kg 0.42 U 0.42 U 0.41 U 0.42 U 0.41 U 0.42 U 0.43 UL 0.52 UL 0.53 UL 0.52 UL 0.52 UL 0.53 UL 0.52 UL 0.52 UL 0.53 UL 0.51 U	l/gm		0	0.42		09.0		0.63		<b>C.7</b>		0.0		
mg/kg 0.42 U 0.42 U 0.41 U 0.41 U 0.42 U 0.45 U 0.41 U 0.45 U 0.4	l/gm			•		٠		14.90		. ?		' (		
mg/kg 0.53 UL 0.53 UL 0.52 Ul mg/kg 7	l/gm			0.42		0.41		0.42	<b>&gt;</b>	0.42		0.43	? :	_
mg/kg - 2.40 5 5 mg/kg - mg/kg - 2.40 5 5 mg/kg 7 0.01 U 0	/am			0.53		0.52		0.52		0.5	2 OL	0.53		,
m, Hexavalent mg/kg 7 2.40 5 6 6 6 6.60 1.60 U 0.01	/mg//			,		•		1230		1		٠,		
Hexavalent mg/kg	/am	7		2.40		ς.		3.90	_	2.9		7		
mg/kg				0.01		0.01		0.01		0.0	1 C	0.0	- C	_
esium  mg/kg  mg/kg  -  mg/kg				•		•		1.30	0	•		•		
mg/kg	O E		0	1.60		1.90		1.60		3.9	0	1.9	0	_
resium  mg/kg  m	/om			•		•		3540		•		•		
Se	) A III		0	2.10		2.10		2.20	•	42.60	<b>.</b> 0	1.70		æ
se mg/kg				•		•		444	0	•		ı		
mg/kg 0.11 U 0.11 U 0.10  mg/kg 3.70 3.70 U 3.70  mg/kg				•				193		1		•		
m mg/kg				0.11		0.10		0.10	O (	0.10		0.11	1 U	_
sium mg/kg				3.70		3.70		3.70	O (	3.70	Ω 0.	3.7		_
rium mg/kg 0.32 U 0.32 U 0.31 U 0.31 U mg/kg 0.42 U 0.42 U 0.41 U 0.32 U 0.32 U 0.31 U U 0.31 U U 0.31 U U 0.31 U U U U U U U U U U U U U U U U U U U	0 6			•		•		268	0	•		•		
min mg/kg 0.42 U 0.41 U 0.41 mg/kg	o E			0.32		0.31		0.31		0.34		0.32		_
m. mg/kg - 0.32 U 0.31 U 0.31 dium mg/kg - 0.32 U 0.31 mg/kg - 0.32 U 0.31 mg/kg 33.10 B 9.90 B 7.10  Petroleum Hydrocarbons mg/kg 382 13.50 6.30	ÒŒ			0.42		0.4		0.42		0.42	I OL	0.43	3 GL	ے
from mg/kg 0.32 U 0.31  from mg/kg				•		•		31.20	0	•		•		
dium mg/kg				0.32		0.3		0.31		0.31	II OL	0.32	7n 7	د
### 7.10 ## 9.90 B 7.10 ### 7.10 ####################################	) e			,		•		8.20	0	•		•		
Petroleum Hydrocarboms mg/kg 382 13.50 6.30	9			9.90		7.10		13.30	0 38	15	æ	17.60		æ
Petroleum Hydrocarbons mg/kg 382 13.50 6.30	Ö.													
Petroleum Hydrocarbons mg/kg 382 13.50 6.30		0.25000						,		9			£	
				13.5(	_	6.3(		13.80	0	11000		22.70	5	
		0.000												

Appendix L - Surface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

	COLLECTION DATE:	PC-RT9-SB7-SS01-02 11/12/92	20-10Si	PC-RT9-SB8-SS01-02 11/12/92	S01-02	PC-RT9-SB9-SS01-02 11/12/92	-SS01-02 92	PC-RT9-SB10-SS01-02 11/12/92	22	rC-K19-SB11-SS01-02 11/12/92	3501-02 2	FC-K19-5812-5501-02 11/13/92	SS01-4 92	22
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	د
8010	3	ý	÷	ć		900		6	:	30	:	Ġ		•
	gw/gn	0.90	9 6	0.93	3 5	0.90	9 6	0.94		0.93	<b>&gt;</b>	0.97		<b>-</b> :
	ug/kg	47.0	۵ :	06.2	3 5	7.0		7.0	_	0.00	<b>:</b>	06.7		<b>.</b>
	ug/kg	0.03		79.0	3 5	40.0	4 C	0.03		0.03	<b>-</b>	0.63		<b>.</b>
	и8/к В	0.89		0.00	3 :	y.0		0.0		0.89		6.0		<b>.</b> :
1,1-Dichloroemane ug	ug/kg	6/.0	<b>&gt;                                    </b>	0.7/	3 5	0.80	<b>-</b>	0.78	3 5	0.79	<b>-</b>	0.8		<b>&gt;</b>
4	18/18 19/1/20	0.09		0.88	3 5	0.0		0.00		0.69		16.0		<b>.</b>
	ug/kg ug/kg	1.40		1.30		1.40		1.40		1.40	-	1.40		o =
e)	ue/ke	1.50		1.40		1.50		1.50	-	1.50		1.50		) D
	ug/kg	0.68	n	0.67	5	0.69		0.68		0.68		0.70		· 5
1,2-Dichloropropane ug	ug/kg	0.68	n	0.67	n	0.69		99.0	m 8	0.68	D	0.70	0	ם
1,2-trans-Dichloroethylene ug	ug/kg	1.20	Ω	1.10	n	1.20	<b>n</b> 0	1.10	m o	1.20	D	1.20	0	ם
	ug/kg	1.20	D	1.10	5	1.20	O 0:	1.10	<b>1</b> 0	1.20	n	1.20	0	ם
1,3-cis-Dichloropropylene ug	ug/kg		ם	0.98	5	1	Ω	0.99	m 6	-	Ω	-		Þ
opylene	ug/kg	0.89	D	0.88	n	06.0	n 0	0.89		0.89	n	0.91	_	D
	ug/kg	1.50	D	1.40		1.50	n 0	1.50		1.50	D (	1.50	0	ם
nyl ether	ug/kg	1.20	Þ	1.10		1.20	n 0:	1.10		1.20	D (	1.20	0	D
	ug/kg	1.10	Þ	-		1.10	n 0	-		1.10	D (	1.10	0	D
	ug/kg	1.20	Þ	1.10		1.20		1.10		1.20		1.20	9	D
	ug/kg	0.79	D	0.77		08.0	•	0.78		0.79		0.81	=	D
	ug/kg	0.95	D	0.93		96'0	Ω 90	0.94		0.95		0.97	7	D
Bromodichloromethane us	ug/kg	1.10		-		1.10		-		1.10		1.10	0	ם
	ng/kg	0.95		0.93		96.0		0.94		0.95		0.97	7	D
loride	ug/kg	0.68		0.67		69.0	Ω 69	0.68		0.68		0.70	0	D
<b>U</b>	ug/kg	0.95		0.93		96.0		0.94		0.95		0.97	7	Þ
•	ug/kg	2.70	-	2.70	_	2.80	_	2.70	_	2.70		2.80	2	ב
	ug/kg	1.20		0.34		1.10		0.77		1.50		0.51		B
ethane	ng/kg	0.84		0.82		0.85		0.83		0.84		0.86	2	Þ
<b>.</b>	ng/kg	0.95		0.93		96.0		0.94		0.95		0.97	7	Þ
	ug/kg	2.90		2.90		3		2.90		2.90		e		þ
Methyl chloride u	ug/kg	2.60		2.60	5	2.70	O 0	2.60	D 0	2.60	_	2.70	2	n
	ng/kg	3.10		0.97		4.20		3.70		2		9.40	2	m
일	ug/kg	0.84	D	0.82		0.85		0.83		0.84		0.86	92	D
316	ug/kg	0.84		0.82		0.85		0.83		0.84		0.86	2	D
Vinyl chloride u	ug/kg	2.70	n (	2.70	ħ	2.80	n 08	2.70	<b>in</b> 0,	2.70	n o	2.80	<u>چ</u>	n

Appendix L - Surface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

LOCATOR: SAMPLE ID: COLLECTION DATE:	LOCATOR: SAMPLE ID: TION DATE:	SB7 PC-RT9-SB7-SS01-02 11/12/92	SS01-02	SB8 PC-RT9-SB8-SS01-02 11/12/92	SS01-02 2	SB9 PC-RT9-SB9-SS01-02 11/12/92		SB10 PC-RT9-SB10-SS01-02 11/12/92		SB11 PC-RT9-SB11-SS01-02 11/12/92		SB12 PC-RT9-SB12-SS01-02 11/13/92	.2
i	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020					:	•	;	•	:	7	=	1.5	n
1,2-Dichlorobenzene	ug/kg	1.50	<b>D</b> 0	1.40	<b>&gt;</b> :	1.50	0	1.30	) <b>:</b>	1.30	) =	1.30	) D
1.2-Dimethylbenzene	ug/kg	1.30		1.2		E. I		Ç	•			-	
1 3-Dichlombenzene	ug/kg	1.90		0.0		9.0		2. L		* •	a :		) =
1 3/1 4 Dimethylhenzene	ue/ke	3.40		3.3(		3.4	n 0	3.3		4.0			
1.4 Dicklinghanders	110/kg			1.10		1.9		1.9		0.1		0.7	
Description of the property of	189/K9	1.50		1.4	n (	1.5	n 0	1.5		1.5		C.I.	
Delixelle	9-9-			9.1		1.9		1.9		1.9		y	
Chlorobelizene	16/16			1.9		0.1		1.90		1.9	) (	ę. i	
Emyloenzene	ug/kg	_	ה ה	11		12		=	Ω	0.5		. 12	<b>-</b> :
Memyi-t-Dutyi Eurei	119/kg			1.5		1.6		1.6		1.6	0	9.1	
alyrene Tollings		5.60	n 09	0.4		0.5	.2 B	5.5		0.2		7.0	
C1 P 3/00								,	;	030	=	350	=
1.7.4.Trichlorohenzene	ug/kg	350	Ω	340	n	350	Þ	340	<b>&gt;</b> ;	350	<b>-</b>	950	<b>=</b>
1.3 Dichlomhenzene	ug/kg	350	Ω	340	n	350	Þ	340	<b>)</b>	350	<b>&gt;</b> :	330	<b>&gt;</b> =
1,2-Dichlorohenzene	ug/kg		Ω	340	D	350	D	340	n	350	<b>-</b> :	350	<b>&gt;</b> :
1 The Later Control of the Control o	no/ko		Ω	340	Ω	350	ם	340	Þ	350	<b>)</b>	950	·
2. Overtied Chlomomorane)	110/60		n	340	n	350	D	340	Ω	320	<b>-</b> ;	350	: כ
2,2 -Oxypis(1-Ciliotophopains)	10/ko		ב	820	D	850	n	830	n	840	<b>)</b>	980	<b>&gt;</b> :
2,4,3-1 neniciopalenoi	110/kg		Þ	340	Ω	350	Ω	340	Þ	350	<b>&gt;</b>	350	<b>&gt;</b> :
2,4,0-1 Heliotophenol	04/611 110/ko		D	340	n	350	Ω	340	D	350	<b>D</b> ;	350	<b>&gt;</b>
2,4-Dichlotophenol	64/6H		Ω	340	Ω	350	n	340	5	350	)	350	<b>&gt;</b> :
2.4-Dinitarchenol	10/kg		Ω	820	n	850	ם	830	5	840	5 :	890	<b>&gt;</b> :
	no/ko		Ω	340	Ω	350	n	340	•	350	<b>&gt;</b>	330	:
2.4-Dimitrotoliene	ug/kg		Ω	340	Ω	350		340	י ב	350	<b>-</b> :	350	<b>&gt;</b> =
2.Chloronanhihalene	ug/kg	350	ח	340	D	350		340	<b>)</b>	330	<b>:</b>	000	) <b>=</b>
2-Chforonhenol	ug/kg	350	Ω	340	Ω	350	Ω	340	o :	350	<b>&gt;</b>	330	<b>=</b>
2. Markyl 4. 6. Dinitrophenol	ug/ke	840	Ω	820	n	820		830	<b>)</b>	840	<b>&gt;</b> ;	000	=
2 Mathing the Common Services	no/ko		Ω	340	Ω	350		340	D	350	<b>&gt;</b> :	350	<b>-</b>
2-Meurymaphunarent	01.61		n	340	D	350		340	<b>&gt;</b>	320	<b>-</b>	350	<b>;</b>
Z-Memyipnenoi	98/86 119/kg		n	820	n	850	_	830	n	840	<b>&gt;</b>	860	<b>&gt;</b> ;
Z-INITOSIMINE	9 ;			340	Ω	350	n	340	D	350	Þ	320	<b>)</b>
Z-Nitrophenol	30 1 30 1			340	Ω			340	Ω	350	ם	350	5
3,3'-Dichlorobenzidine	26 . 36 . 37 .			820	=		Ω	830	D	840	n	860	Þ
3-Nitroaniline	ug/kg		) <b>:</b>	340	> =	350	Ω	340	n	350	D	350	ם
4-Bromophenyl phenyl ether	ug/kg	320 8	>	2	•		•	1					
		5555											

Appendix L - Surface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

LOCATOR: SAMPLE ID: COLLECTION DATE:		SB7 PC-RT9-SB7-SS01-02 11/12/92	SS01-02	SB8 PC-RT9-SB8-SS01-02 11/12/92	SS01-02 12	SB9 PC-RT9-SB9-SS01-02 11/12/92	.SS01-02 92	SB10 PC-RT9-SB10-SS01-02 11/12/92	-SS01-02 72	SB11 PC-RT9-SB11-SS01-02 11/12/92	-SS01-02 12	SB12 PC-RT9-SB12-SS01-02 11/13/92	-SS01-02
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloro-3-methyl phenol	ug/kg	350	n	340	Þ	350	D	340	n	350	Ω	350	Ð
4-Chloroaniline	ug/kg	350	D	340	D	350	n	340	n	350	D	350	D
4-Chlorophenyl phenyl ether	ug/kg	350	Ω	340	n	350	ם	340	Ω	350	Ω	350	Ω
4-Methylphenol	ug/kg	350	Ω	340	Ω	350	D	340	Ω	350	n	350	D
4-Nitroaniline	ug/kg	840	Ω	820	Ω	850	Þ	830	ם	840	D	860	D
4-Nitrophenol	ug/kg	840	n	820	n	850	ħ	830	n	840	n	860	'n
Acenaphthene	ug/kg	350	n	340	Ω	350	n	340	ם	350	Ω	350	Ω
Acenaphthylene	ug/kg	350	n	340	D	350	D	340	n	350	Ω	350	Ω
Anthracene	ug/kg	350	Ω	340	Ω	350	Ω	340	n	350	D	350	n
Benzo(a)anthracene	ug/kg	350	ב	340	Ω	350	Ω	340	D	350	Ω	350	D
Benzo(a)pyrene	ug/kg	350	Ω	340	Ω	350	Ω	340	D	350	D	350	n
Benzo(b)fluoranthene	ug/kg	350	D	340	n	350	Ω	340	Ω	350	Ω	350	Ω
Benzo(ghi)perylene	ug/kg	350	Þ	340	ם	350	Ω	340	ם	350	D	350	D
Benzo(k)fluoranthene	ug/kg	350	Ω	340	ם	350	Ω	340	n	350	D	350	Ω
Butyl benzyl phthalate	ug/kg	350	'n	340	5	350	n	340	5	350	n	350	5
Carbazole	ug/kg	350	D	340	n	350	n	340	Þ	350	Ω	350	Ω
Chrysene	ug/kg	350	Ω	340	Ω	350	D	340	Ω	350	D	350	ם
Di-n-butyl phthalate	ug/kg	150	æ	210	B	230	20	340	n	27	æ	98	Ø
Di-n-octyl phthalate	ug/kg	350	5	340	'n	350	n	340	n	350	n	350	Þ
Dibenzo(a,h)anthracene	ug/kg	350	Ω	340	D	350	n	340	Ω	350	D	350	ם
Dibenzofuran	ug/kg	350	Ω	340	ם	350	D.	340	D	350	Ω	350	D
Diethyl phthalate	ug/kg	350	Ω	340	Þ	350	D	340	n	350	D	350	Ω
Dimethyl phthalate	ug/kg	350	n	340	D	350	Ω	340	D	350	ם	350	n
Fluoranthene	ug/kg	350	n	340	n	350	D	340	D	350	Þ	350	Ω
Fluorene	ug/kg	350	Ω	340	Ω	350	Ω	340	D	350	D	350	n
Hexachlorobenzene	ug/kg	350	Ω	340	Ω	350	Ω	340	Ω	350	n	320	ם
Hexachlorobutadiene	ug/kg	350	D	340	Þ	350	D	340	D	350	Ω	350	D
Hexachlorocyclopentadiene	ug/kg	350	Ω	340	n	350	n	340	ב	350	Þ	320	ם
Hexachloroethane	ug/kg	350	D	340	ם	350	Ω	340	Ω	350	Ω	350	n
Indeno(1,2,3-c,d)pyrene	ug/kg	350	Ω	340	n	350	n	340	D	350	D	350	ם
Isophorone	ug/kg	350	D	340	ם	350	Ω	340	D	350	n	350	n
N-Nitrosodi-N-Propylamine	ug/kg	350	5	340	5	350	5	340	5	350	Þ	350	Þ
N-Nitrosodiphenylamine	ug/kg	350	D	340	D	350	ם	340	ħ	350	m	350	ם
Naphthalene	ug/kg	350	Ω	340	Ω	350	ם	340	D	350	D	350	ם
Nitrobenzene	ug/kg	350	Þ	340	D	350	n	340	n	350	D	350	n
Pentachlorophenol	ug/kg	840	n	820	Þ	850	Ω	830	D	840	n	860	D

Appendix L - Surface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

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SS01-0. 2	QUAL	_	•	,		_									9	4	-		Ç	=		0		9										0.22	ł				14.50	?	
SB12 PC-RT9-SB12-SS01-02 11/13/92	RESULT	350		000	320	350	350	OC	22		•	6.10	0.7	•	0.2	•	}	• •	5.40	0.0	•	7.80	•	2.60	•	, ,		÷ •	4	•	ö	÷	•	c	5 (	•	0		14	•	
	QUAL	:	<b>)</b> ;	>	Þ	=	;	<b>&gt;</b>	-				<b>B</b>					3				Þ				2			<b>&gt;</b> :			ם		? =			æ				
SB11 PC-RT9-SB11-SS01-02 11/12/92	RESULT Q	0	OCC.	320	350	350		320	150		2640	9	0.52	7.60	0.21	13:0	6.0	283	4.10	0.01	1.20	2.60	2220	1 20	77:1	40 c	07:57	0.10	4.20	210	0.42	_	87.30	5.0	17.0	06.6	4.30			14.10	
	QUAL	;	>	Þ	ם	=	<b>&gt;</b> 1	Þ	5		_	Þ	BO	2	} =	<b>&gt;</b> :	Þ	3		ם	BO	}=	)	•	۷ ;	<b>B</b> 0		z 5	ב	n	D	=	9	};	ם ה	<b>8</b> 0	8				
SB10 PC-RT9-SB10-SS01-02 11/12/92	result qu		340	340	340		340	340	340		2710	5.90	590	1 90	0.7	17.0	0.52	230	3.70	0.0	1 20	09.0	73.60	7380	07.1	490	21.10	0.10	4.20	207	0.42		1 6	81.40	0.21	5.10	4.90			21.50	
	QUAL		D	n	· =	<b>)</b>	Þ	ם	m	;	_	=	)	ć		Þ				=	) <b>=</b>	<b>:</b>							ר					80			22				
SB9 PC-RT9-SB9-SS01-02 11/12/92	RESULT QU		350	350	250	000	350	350	350		2350		-	1.10	10.20	0.21	0.53	2570	2 2	0.50	10.0	07.1	2.70	2300	1.70	813	47.50	0.11	4.20	\$15	640	74.0	1.10	97.30	0.21	5.50	2 60			20.50	
	QUAL		ם	=	<b>:</b>	>	Þ	=	) <u>=</u>	3	-	٠;	<b>&gt;</b>	) R	<b>B</b> 0	n	=	9 6	2	:	> ;	<b>B</b> 0	>					7	5 =	) <b>:</b>	<b>:</b>	<b>O</b>	Þ	<b>B</b>	'n		٥	٩			
SB8 PC-RT9-SB8-SS01-02 11/12/92	RESULT QU		340	2 6	340	340	340	340	240	340		1000	5.90	0.71	2.60	0.21	0.50	300	338	3.60	0.01	1.20	2.60	2290	1.40	533	61 60	01.0	0.10	7.10	200	0.41	_							19.60	
11-02	OUAL		=	<b>:</b>	)	Þ	=	:	> ;	3	•	_	D	<b>B</b> 0	BO	ì	) <b>:</b>	2	<b>B</b> 0			B0				ă			) :				n		=			<b>x</b> a			
SB7 PC-RT9-SB7-SS01-02 11/12/92	PESULT 0		036	950	320	350	350	0.00	320	350		4220	9	0.65	13	0.21	17:0	75.0	495	5.30	0.01	1.30		33		*					2(	0.42	-	84.10				6.80		50	
LOCATOR: SAMPLE ID: COLLECTION DATE:	- PINII			ng/kg	ng/kg	no/kg	9	ug/kg	ug/kg	ng/kg		mg/kg	mg/kg	mg/kg	mo/ko	11.5/11.	mg/kg	mg/kg	mg/kg	mg/kg	l/gm	mg/kg	mø/kg	97/cm	30/gm	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	0.0 0	7	mg/kg	mg/kg	mg/kg		ano.	
BIIOD				Phenanthrene	Phenoi		Pyrene	bis(2-Chloroethoxy)methane	bis(2-Chloroethyl) ether	bis(2-Ethylhexyl)phthalate	METALS	Aluminum	Antimony		All Marie	Barum	Beryllium	Cadmium	Calcillat	Chromium	Chomium Hexavalent	Ollow Treatment		Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium			Silver	Sodium	Thallium	Vanadium	Zinc		TPH	Total Petroleum Hydrocarrous

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

thane ug/kg 0.95 U ug/kg 0.27 B ug/kg 0.27 B ug/kg 0.89 U ug/kg 0.88 U ug/kg 0.88 U ug/kg 0.88 U ug/kg 0.88 U ug/kg 0.89 U ug/kg 0.99 U ug/kg 0.95 U	QUAL U	RESULT QUAL  1 0 0.48 U 0.59 U 0.99 U 0.99 U 1.50 U 1.60 U 0.76 U	AL RESULT  U U U U U U U U U U U U U U U U U U	1.10 U 0.30 B 0.71 U 0.30 B 0.71 U 0.89 U 1.10 U 1.50 U 1.70 U 1.70 U 0.77 U 0.77 U 1.30 U 1.	_	0.99 0.26 0.26 0.93 0.93 0.93 0.99 1.50 0.71	QUAL B B UU	RESULT C 0.22 0.70 0.87 0.87 0.99 1 1.60 0.76 0.76 0.76	GUAL BE
ug/kg 0.95 U ug/kg 0.27 B ug/kg 0.63 U ug/kg 0.89 U ug/kg 0.89 U ug/kg 0.89 U ug/kg 0.89 U ug/kg 0.88 U ug/kg 0.68 U ug/kg 0.89 U ug/kg 0.89 U ug/kg 0.89 U ug/kg 0.95 U		1 0.48 0.70 0.99 0.87 1 1.50 1.60 0.76 0.76 0.76 1.30 1.10		1.10 0.30 0.71 1 1.00 1.10 1.70 0.77 0.77 0.77 1.30 1.10		0.99 0.26 0.68 0.93 0.93 0.99 1.50 0.71	5 <b>8</b> 5 5 5 5 5 5 5 5	1 0.22 0.70 0.99 0.89 1 1.50 1.60 0.76 0.76	5 - 55555555555555555555555555555555555
ug/kg 0.27 B ug/kg 0.63 U ug/kg 0.89 U ug/kg 1.50 U ug/kg 1.20 U ug/kg 0.89 U ug/kg 0.95 U		0.48 0.70 0.99 0.87 0.99 1.50 0.76 0.76 1.30 1.10 0.99		1.10 0.30 0.71 1 0.89 1.10 1.50 1.70 0.77 0.77 1.30 1.10		0.59 0.56 0.58 0.93 0.93 0.99 1.40 1.50 0.71	5 <b>*</b> 5 5 5 5 5 5 5 5 5 5	0.22 0.70 0.70 0.99 1.50 1.60 0.76 0.76	3 <b>4</b> 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
ug/kg 0.27 B  ug/kg 0.63 U  ug/kg 0.79 U  ug/kg 0.79 U  ug/kg 0.89 U  ug/kg 0.95 U  ug/kg 1.50 U  ug/kg 0.68 U  ug/kg 1.20 U  ug/kg 0.89 U  ug/kg 0.95 U		0.48 0.70 0.99 0.87 0.99 1.50 0.76 0.76 1.30 1.10 0.99		0.30 0.71 1 0.89 1.10 1.50 1.70 0.77 0.77 1.30 1.10	* > > > > > > > > > > > > > > > > > > >	0.26 0.93 0.93 0.82 0.93 1.40 1.50 0.71	*55555555555	0.22 0.70 0.99 0.87 1 1.50 1.60 0.76 0.76 0.76	*55555555555555
ug/kg 0.63 U ug/kg 0.89 U ug/kg 0.79 U ug/kg 0.95 U ug/kg 1.50 U ug/kg 1.50 U ug/kg 1.20 U ug/kg 0.89 U ug/kg 0.89 U ug/kg 0.95 U		0.70 0.99 0.99 1.50 1.60 0.76 0.76 1.30 1.10 0.99		0.71 0.89 1 1.10 1.50 1.70 0.77 0.77 1.30 1.10	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0.66 0.93 0.93 0.99 1.40 1.50 0.71	55555555555	0.70 0.99 0.99 1.50 1.50 0.76 0.76 0.76 0.76	6666666666666
hane ug/kg 0.89 U  lene ug/kg 0.79 U  lene ug/kg 0.79 U  ug/kg 0.95 U  ug/kg 1.50 U  ug/kg 1.50 U  sane ug/kg 0.68 U  sonehylene ug/kg 1.20 U  sonopylene ug/kg 1.20 U  sonopylene ug/kg 1.20 U  sonopylene ug/kg 1.20 U  sonopylene ug/kg 1.20 U  ug/kg 0.95 U		0.99 0.87 0.99 1.50 1.60 0.76 0.76 1.30 1.10 0.99 1.30		1 0.89 1.10 1.50 1.70 0.77 0.77 1.30 1.10		0.93 0.82 0.93 1.40 1.50 0.71	55555 <sup>0</sup> 555	0.99 0.87 0.99 1.50 1.60 0.76 0.76 1.30	555555555555555555555555555555555555555
ne         ug/kg         0.79         U           lene         ug/kg         0.89         U           copane         ug/kg         0.89         U           zene         ug/kg         1.50         U           zene         ug/kg         0.68         U           neehylene         ug/kg         0.68         U           nochtylene         ug/kg         1.20         U           nochtylene         ug/kg         1.20         U           nochtylene         ug/kg         1.20         U           norbyjene         ug/kg         1.20         U           norbyjene         ug/kg         1.20         U           norbyjene         ug/kg         1.20         U           norbyjene         ug/kg         1.20         U           norbygene         ug/kg         1.20         U           ug/kg         1.20         U         U           ug/kg         1.20         U         U           ug/kg         0.95         U           ug/kg         0.95         U           ug/kg         0.95         U           ug/kg         0.95         U		0.87 0.99 1 1.50 1.60 0.76 0.76 1.30 1.10 0.99 1.30	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0.89 1.10 1.50 1.70 0.77 0.77 1.30 1.10		0.82 0.93 0.99 1.40 1.50 0.71	5555 <sup>0</sup> 555	0.87 0.99 1 1.50 1.60 0.76 0.76 1.30	555555555555
lene ug/kg 0.89 U  ropane ug/kg 0.95 U  zene ug/kg 1.40 U  zene ug/kg 1.50 U  sane ug/kg 0.68 U  sane ug/kg 1.20 U  ropropylene ug/kg 1.20 U  ropropylene ug/kg 1.20 U  syl ether ug/kg 1.20 U  ug/kg 0.95 U		0.99 1 1.50 1.60 0.76 0.76 1.30 1.10 1.10 1.10	0000000000000	1 1.10 1.50 1.70 0.77 0.77 1.30 1.10		0.93 0.99 1.40 1.50 0.71	555°555	0.99 1 1.50 1.60 0.76 0.76 1.30	5555555555
ropane ug/kg 0.95 U  zene ug/kg 1.40 U  zene ug/kg 1.50 U  sane ug/kg 0.68 U  sane ug/kg 1.20 U  sopropylene ug/kg 1.20 U  some ug/kg 1.20 U  some ug/kg 1.20 U  some ug/kg 1.20 U  ug/kg 0.95 U		1 1.50 1.60 0.76 0.76 1.30 1.10 0.99 1.60	222222222	1.10 1.50 1.70 0.77 0.77 1.30 1.10		0.99 1.40 1.50 0.71	55°555	1 1.50 1.60 0.76 0.76 1.30	555555555
nee         ug/kg         1.40         U           cene         ug/kg         1.50         U           ne         ug/kg         1.50         U           ne         ug/kg         0.68         U           ne         ug/kg         1.20         U           coethylene         ug/kg         1.20         U           propylene         ug/kg         1.20         U           copropylene         ug/kg         1.50         U           ug/kg         1.20         U         U           vyl ether         ug/kg         1.20         U           ug/kg         1.20         U         U           ug/kg         1.10         U         U           ug/kg         0.79         U           ug/kg         0.95         U           ug/kg <td></td> <td>1.50 1.60 0.76 0.76 1.30 1.10 0.99 1.60</td> <td>000000000</td> <td>1.50 1.70 0.77 0.77 1.30 1.10</td> <td></td> <td>1.40 1.50 0.71 0.71</td> <td>5 2 5 5 5</td> <td>1.50 1.60 0.76 0.76 1.30</td> <td>5555555</td>		1.50 1.60 0.76 0.76 1.30 1.10 0.99 1.60	000000000	1.50 1.70 0.77 0.77 1.30 1.10		1.40 1.50 0.71 0.71	5 2 5 5 5	1.50 1.60 0.76 0.76 1.30	5555555
cene         ug/kg         1.50         U           ne         ug/kg         0.68         U           sane         ug/kg         0.68         U           coethylene         ug/kg         1.20         U           zene         ug/kg         1.20         U           propylene         ug/kg         1.50         U           copropylene         ug/kg         1.50         U           ug/kg         1.20         U           ug/kg         1.20         U           ug/kg         1.20         U           ug/kg         1.20         U           ug/kg         0.79         U           ug/kg         0.79         U           ug/kg         0.95		1.60 0.76 0.76 1.30 1.10 0.99 1.60	000000000	1.70 0.77 0.77 1.30 1.10	55555	0.71 0.71 0.71	P 5 5 5	1.60 0.76 0.76 1.30	555555
ne         ug/kg         0.68         U           voethylene         ug/kg         1.20         U           zene         ug/kg         1.20         U           zene         ug/kg         1.20         U           propylene         ug/kg         1.80         U           copropylene         ug/kg         0.89         U           ug/kg         1.50         U         U           vyl ether         ug/kg         1.10         U           ug/kg         1.20         U         U           ug/kg         0.79         U         U           ug/kg         0.79         U         U           ug/kg         0.95         U         U           ug/kg         0.95 <t< td=""><td></td><td>0.76 0.76 1.30 1.30 1.10 0.99 1.60</td><td></td><td>0.77 0.77 1.30 1.30 1.10</td><td></td><td>0.71</td><td>555</td><td>0.76 0.76 1.30</td><td>55555</td></t<>		0.76 0.76 1.30 1.30 1.10 0.99 1.60		0.77 0.77 1.30 1.30 1.10		0.71	555	0.76 0.76 1.30	55555
name         ug/kg         0.68         U           celebylene         ug/kg         1.20         U           zene         ug/kg         1.20         U           propylene         ug/kg         1.20         U           copropylene         ug/kg         0.89         U           zene         ug/kg         0.89         U           zene         ug/kg         1.20         U           ug/kg         1.10         U         U           ug/kg         0.79         U         U           ug/kg         0.95         U		0.76 1.30 1.10 0.99 1.60		0.77 1.30 1.30 1.10	222	0.71	55	0.76	5555
coethylene         ug/kg         1.20         U           zene         ug/kg         1.20         U           propylene         ug/kg         1         U           zene         ug/kg         1.50         U           zene         ug/kg         1.50         U           zene         ug/kg         1.20         U           ug/kg         1.10         U         U           ug/kg         0.79         U         U           ug/kg         0.95         U		1.30 1.30 1.10 0.99 1.60	22222	1.30 1.30 1.10	םם		5	1.30	555
zene         ug/kg         1.20         U           propylene         ug/kg         1         U           copropylene         ug/kg         0.89         U           zene         ug/kg         1.50         U           yl ether         ug/kg         1.10         U           ug/kg         1.10         U         U           ug/kg         0.79         U         U           ug/kg         0.95         U         U           ug/kg         0.95         U         U           ug/kg         0.95         U         U           ug/kg         0.91         B         U           ug/kg         0.91         B         U           ug/kg         0.95         U		1.30 1.10 0.99 1.60 1.30		1.30 1.10 1	Ω	77.1	,	1.30	55
propylene         ug/kg         1         U           copropylene         ug/kg         0.89         U           zene         ug/kg         1.50         U           yl ether         ug/kg         1.10         U           ug/kg         1.20         U         U           ug/kg         0.79         U         U           ng/kg         0.95         U         U           oride         ug/kg         0.95         U           ug/kg         0.95         U         U           ug/kg         0.95         U         U           ug/kg         0.95         U         U           ug/kg         0.91         B         U           ug/kg         0.95         U		1.10 0.99 1.60 1.30		1.10		1.20	Þ	•	5
ropropylene         ug/kg         0.89         U           zene         ug/kg         1.50         U           vyl ether         ug/kg         1.10         U           ug/kg         1.10         U           ug/kg         0.79         U           ug/kg         0.95         U           echane         ug/kg         0.95         U           oride         ug/kg         0.95         U           ug/kg         0.95         U         U           ug/kg         0.95         U         U           ug/kg         0.91         B         U           ug/kg         0.91         B         U           ug/kg         0.95         U         U           ug/kg         0.95         U         U           ug/kg         0.95         U         U           ug/kg         2.00         U         U           ug/kg         2.00         U         U		0.99 1.60 1.30	מממ	-	n		'n	1.10	***
zene         ug/kg         1.50         U           vyl ether         ug/kg         1.20         U           ug/kg         1.10         U         U           ug/kg         0.79         U         U           thane         ug/kg         0.95         U           ug/kg         0.95         U         U           oride         ug/kg         0.95         U           ug/kg         0.91         B           ug/kg         0.91         B           ug/kg         0.95         U           ug/kg         2.00         U           ug/kg         2.60         U		1.60	ממ		D	0.93	'n	0.99	3
vyl ether         ug/kg         1.20         U           ug/kg         1.10         U           ug/kg         1.20         U           ug/kg         0.79         U           ug/kg         0.95         U           oride         ug/kg         0.95         U           oride         ug/kg         0.95         U           ug/kg         0.95         U         U           ug/kg         0.91         B           ug/kg         0.91         B           ug/kg         0.95         U           ug/kg         0.95         U           ug/kg         0.95         U           ug/kg         2.00         U           ug/kg         2.90         U           ug/kg         2.60         U		1.30	Ω	1.70	n	1.50	ם	1.60	5
ug/kg         1.10         U           ug/kg         1.20         U           ug/kg         0.79         U           hane         ug/kg         0.95         U           ng/kg         1.10         U           oride         ug/kg         0.95         U           ug/kg         0.95         U           ug/kg         0.95         U           ug/kg         0.91         B           ug/kg         0.91         B           ug/kg         0.95         U           ug/kg         0.95         U           ug/kg         0.95         U           ug/kg         2.90         U           ug/kg         2.90         U           ug/kg         2.60         U				1.30	D	1.20	n	1.30	n
ug/kg         1.20         U           ug/kg         0.79         U           hane         ug/kg         0.95         U           nethane         ug/kg         1.10         U           oride         ug/kg         0.95         U           ug/kg         0.95         U         U           ug/kg         0.95         U         U           ug/kg         0.91         B         u           ug/kg         0.91         B         U           ug/kg         0.95         U         U           ug/kg         0.95         U         U           ug/kg         2.90         U         U           ug/kg         2.60         U         U		1.20	Ω	1.20	D	1.10	D	1.20	5
ug/kg 0.79 U ug/kg 0.95 U ug/kg 0.91 B ug/kg 0.91 B ug/kg 0.91 B ug/kg 0.91 U ug/kg 0.95 U		1.30	Ω	1.30	n	1.20	n	1.30	n
ug/kg 0.95 U ug/kg 1.10 U ug/kg 0.95 U ug/kg 0.91 B ug/kg 0.91 B ug/kg 0.91 B ug/kg 0.95 U ug/kg 0.91 U ug/kg 0.95 U	0.79 U	0.87	D.	0.89	Þ	0.82	n	0.87	n
ug/kg 1.10 U ug/kg 0.95 U ug/kg 0.68 U ug/kg 0.95 U ug/kg 0.95 U ug/kg 0.95 U ug/kg 0.91 B ug/kg 0.91 B ug/kg 0.95 U ug/kg 0.91 C ug/kg 0.95 U ug/kg 0.95 U ug/kg 2.90 U ug/kg 2.90 U		_	Ω	1.10	D	0.99	5	_	5
ug/kg         0.95         U           ug/kg         0.68         U           ug/kg         0.95         U           ug/kg         2.70         U           ug/kg         0.91         B           ne         ug/kg         0.95         U           e         ug/kg         2.90         U           e         ug/kg         2.60         U		1.20	Ω	1.20	D	1.10	n	1.20	Ē
loride ug/kg 0.68 U ug/kg 0.95 U ug/kg 2.70 U ug/kg 0.91 B methane ug/kg 0.95 U e ug/kg 0.95 U e ug/kg 0.95 U e ug/kg 2.90 U	0.95 U	-	D	1.10	Þ	0.99	5	_	5
ug/kg         0.95         U           ug/kg         2.70         U           ug/kg         0.91         B           me         ug/kg         0.95         U           e         ug/kg         2.90         U           e         ug/kg         2.60         U	O.68 U	9.76	D	0.77	D	0.71	5	92.0	5
ug/kg         2.70         U           ug/kg         0.91         B           omethane         ug/kg         0.84         U           ane         ug/kg         0.95         U           de         ug/kg         2.90         U           de         ug/kg         2.60         U	0.95 U	-	ם	1.10	D	0.99	D	-	5
ug/kg 0.91 B ug/kg 0.84 U ug/kg 0.95 U ug/kg 2.90 U ug/kg 2.60 U	2.70 U	ю	ם	3.10	D	2.90	5	3	n
ug/kg 0.84 U ug/kg 0.95 U ug/kg 2.90 U ug/kg 2.60 U	0.83 B	0.92	В	0.79	æ	69.0	<b>2</b> 0	0.74	8
ug/kg 0.95 U ug/kg 2.90 U ug/kg 2.60 U	0.84 U	0.93	Ω	0.95	n	0.88	5	0.93	n
ug/kg 2.90 U ug/kg 2.60 U	0.95 U		n	1.10	ם	0.99	5		Ð
ug/kg 2.60 U	2.90 U	3.30	D	3.30	Ω	3.10	n	3.30	n
	2.60 U	2.90	Ω	m	Ω	2.70	n	2.90	D
Methylene chloride ug/kg 2.50 B 1.1	1.80 B	9.10	-	5.40	B	2.50	B	5.10	
Tetrachloroethylene ug/kg 0.84 U 0.8		0.93	Ω	0.95	Þ	0.88		0.93	5
Ω		0.93	Ω	0.95	Ω	0.88		0.93	Ð
Vinyl chloride ug/kg 2.70 U 2.7	2.70 U	3	D	3.10	Þ	2.90	í	m	n

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

																																		_	_		_	
3-04	QUAL	-	• =	<b>&gt;</b> ;	>	;	<b>:</b>	>	1	)	Þ	D	Þ	Þ	ם		Ξ	<b>:</b>	<b>)</b>	ם	Þ	Þ	D	ם	ם	•	ב	•	Þ	<b>-</b>	Þ	•	Þ	Þ	Þ	ם	ר	
SB6 PC-P1-SB6-SS03-04 08/24/93	RESULT	6	09.5	<b>9</b> .1	2.10	•	3.70	2.10	•	1.60	2.10	2.10	13	1.70	6.20		380	200	380	380	380	380	930	380	380	380	930	380	380	380	380	930	380	380	930	380	380	
\$	QUAL	;	<b>:</b>	>	æ		ם י	m		Þ	Þ	Þ	ם	ם	ם		=	<b>)</b>	Þ	Þ	Þ	ב	D	ם	ם	Þ	Þ	ם	Þ	ם	ם	Þ	ם	ם	ם	ם	n	
SB5 PC-P1-SB5-SS03-04 08/24/93	RESULT Q	•	0.7	1.30	0.29	•	3.50	0.65	•	1.50	7	7	12	1.60	5.80		036	390	360	360	360	360	880	360	360	360	880	360	360	360	360	880	360	360	880	360	360	
	QUAL	:	<b>&gt;</b> :	)	Ø		ם	ם		n	D	D	n	D	æ		:	5	Þ	ם	D	n	Ω	ם	D	ם	n	כ	Ω	ם	Þ	ם	n	D	n	ם	Ω	
SB4 PC-P1-SB4-SS02-03 08/24/93	RESULT Q		0.1	1.40	0.45	•	3.80	2.10	•	1.70	2.10	2.10	13	1.80	0.22		000	390	390	390	390	390	950	390	390	390	950	390	390	390	390	950	390	390	950	390	390	
	QUAL				Ω		D	М			n	Ω	D	n			:	>	D	n	Ω	D.	ח	Þ	n	n	ם	ם	ם	ח	D	D	Ω	n	n	Ω	n	
SB2 PC-BG1-SB2-SS02-03 08/15/93	RESULT QU	;	67.0	0.14	2.10	•	3.70	0.11	,	0.04	2.10	2.10	13	1.70	5.60			380	380	380	380	380	930	380	380	380	930	380	380	380	380	930	380	380	930	380	380	
	QUAL		<b>D</b>	Þ	n		D	ם		ם	D	D	ם	ם	n	)	1	<b>-</b>	P	n	Ω	n	=	D	n	ם	n	Þ	ם	ם	n	n	n	D	Ω	D	n	
SB1 PC-BG1-SB1-SS09-10 08/09/93	RESULT Q		1.50	1.30	1.90	•	3.40	1.90	•	1.50	1.90	1.90	12	1.60	2.60		;	340	340	340	340	340	830	340	340	340	830	340	340	340	340	830	340	340	830	340	340	
02-03	QUAL		Þ	n	Þ		D	ם		ם	D	Π	· 1	=	=	•		Þ	Þ	D	11	=	=	) <b>)</b>	D	n	D	ם	D	n	D	D	ם	D	Ω	ם	Ω	
SB1 PC-BG1-SB1-SS02-03 08/09/93	RESULT		1.50	1.30	1.90	•	3.40	1.90	٠	1.50	1.90	1 90	12	1 60	9 \$			340	340	340	340	340	830	340	340	340	830	340	340	340	340	830	340	340	830	340	340	
LOCATOR: SAMPLE ID: 1 COLLECTION DATE:	UNITS:		ug/kg	ng/kg	ug/kg	ug/kg	ug/kg	ug/kg	ng/kg	ue/kg	110/kg	- 26' NG	67.65 110/kg	9./gn	94/9n	9 1 1 1 1 1 1 1		ug/kg	ug/kg	ng/kg	0 0 110/kg			10/kg	IIO/ko	ue/ke	ug/kg	ng/kg	ug/kg	ng/kg	ne/ke	ne/ke	ug/kg	119/kg	O:: 91	ug/kg	ug/kg	) )
COLLEC		8020	1,2-Dichlorobenzene	1.2-Dimethylbenzene	1.3-Dichlorobenzene	1.3-Dimethylbenzene	1.3/1.4-Dimethylbenzene	1.4-Dichlorobenzene	1 4-Dimethylbenzene	Renzene	Chlombanana	Ciliotopelizene	Model to Dured Differ	Meulyl-t-buryl Eurel	Stylelie	Toluene	CLP 3/90	1.2.4-Trichlorobenzene	1 2-Dichlorobenzene	1 3. Dichlorobenzene	1 A Disklambana	1,4-Diciliotobelizene	2,2 -Oxybis(1-Ciliotopiane)	2,4,3-1 nenioropiienoi	2,4,0-111cmotophenol	2 4-Dimethylphenol	2 4-Dimitrophenol	2.4.Dinitrotoliuene	2 6-Dinitrotoluene	2-Chlomosanhthalene	2-Chlorophenol	2-Methyl-4 6-Dinitrophenol	2. Methylnanhihalene	2 Mathylphanol	2-Michiganitan	2.Nitronhenol	3 4'-Dichlorohenzidine	

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

LOCATOR: SAMPLE ID: COLLECTION DATE:	LOCATOR: SAMPLE ID: TION DATE:	SB1 PC-BG1-SB1-SS 08/09/93	-SS02-03 93	SB1 PC-BG1-SB1-SS09-10 08/09/93	SS09-10	SB2 PC-BG1-SB2-SS02-03 08/15/93	SS02-03	SB4 PC-P1-SB4-SS02-03 08/24/93	\$\$02-03 33	SB5 PC-P1-SB5-SS03-04 08/24/93	SS03-04	SB6 PC-P1-SB6-SS03-04 08/24/93	S03-04
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
3-Nitroaniline	ug/kg	830	D	830	D	930	D	950	Ω	880	Þ	930	Ω
4-Bromophenyl phenyl ether	ug/kg	340	ם	340	Þ	380	n	390	D	360	D	380	n
4-Chloro-3-methyl phenol	ug/kg	340	D	340	Ω	380	Ω	390	D	360	D	380	D
4-Chloroaniline	ug/kg	340	D	340	D	380	n	390	Þ	360	D	380	Ω
4-Chlorophenyl phenyl ether	ug/kg	340	D	340	Ω	380	Ω	390	ם	360	n	380	ם
4-Methylphenol	ug/kg	340	Þ	340	Ω	380	D	390	D	360	D	380	ם
4-Nitroaniline	ug/kg	830	n	830	n	930	Ω	950	Ω	880	D	930	ם
4-Nitrophenol	ug/kg	830	Ω	830	n	930	D	950	D	880	Ω	930	ם
Acenaphthene	ug/kg	340	Ω	340	Ω	380	D	390	Ω	360	n	380	Ω
Acenaphthylene	ug/kg	340	Ω	340	Ω	380	ם	390	Ω	360	D	380	Þ
Anthracene	ug/kg	340	Ω	340	Ω	380	n	390	Ω	360	n	380	Ω
Benzo(a)anthracene	ug/kg	340	n	340	n	380	D	390	n	360	D	380	ם
Benzo(a)pyrene	ug/kg	340	Ω	340	n	380	Ω	390	n	360	ב	380	Ω
Benzo(b)fluoranthene	ug/kg	340	n	340	D	380	Ω	390	Ω	360	Ω	380	O
Benzo(ghi)perylene	ug/kg	340	D	340	n	380	n	390	n	360	D	380	ם
Benzo(k) fluoranthene	ug/kg	340	Ω	340	ם	380	Ω	390	Ω	360	n	380	Ġ
Butyl benzyl phthalate	ug/kg	340	Ω	340	n	380	Ω	390	Ω	360	D	380	ב
Carbazole	ug/kg	340	Ω	340	ם	380	n	390	ם	360	D	380	n
Chrysene	ug/kg	340	Ω	340	D	380	Ω	390	D	360	Þ	380	ם
Di-n-butyl phthalate	ug/kg	340	D	340	D	380	D	390	Ω	360	D	380	ם
Di-n-octyl phthalate	ug/kg	340	D	340	Ω	380	Ω	390	D	360	n	380	ם
Dibenzo(a,h)anthracene	ug/kg	340	D	340	n	380	Ω	390	D	360	n	380	D
Dibenzofuran	ug/kg	340	ם	340	D	380	n	390	n	360	Ω	380	D
Diethyl phthalate	ug/kg	340	Ω	340	Ω	380	n	390	n	360	D	380	כ
Dimethyl phthalate	ug/kg	340	Ω	340	Ω	380	D	390	Ω	360	ם	380	ם
Fluoranthene	ug/kg	340	Ω	340	Ω	380	Þ	390	Ω	360	D	380	D
Fluorene	ug/kg	340	n	340	Ω	380	D	390	Ω	360	n	380	D
Hexachlorobenzene	ug/kg	340	Ω	340	ח	380	D	390	D	360	n	380	D
Hexachlorobutadiene	ug/kg	340	Ω	340	ם	380	Ω	390	D	360	Þ	380	n
Hexachlorocyclopentadiene	ug/kg	340	Ω	340	Ω	380	D	390	n	360	n	380	ם
Hexachloroethane	ug/kg		Ω	340	ם	380	Þ	390	D	360	D	380	n
Indeno(1,2,3-c,d)pyrene	ug/kg	340	n	340	D	380	Ω	390	ם	360	n	380	ם י
Isophorone	ug/kg	340	Ω	340	D	380	Ω	390	D	360	D	380	n
N-Nitrosodi-N-Propylamine	ug/kg	340	D	340	n	380	Ω	390	ם	360	Þ	380	n
N-Nitrosodiphenylamine	ug/kg		D	340	D	380	Ω	390	Ω	360	Þ	380	D
Naphthalene	ug/kg		ם	340	n	380	n	390	D	360	Ω	380	D
						•							

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

LOCATOR: SAMPLE ID: COLLECTION DATE:		SB1 PC-BG1-SB1-S 08/09/93	SS02-03	SB1 PC-BG1-SB1-SS09-10 08/09/93	S09-10	SB2 PC-BG1-SB2-SS02-03 08/15/93	S02-03	SB4 PC-P1-SB4-SS02-03 08/24/93	05-03	SB5 PC-P1-SB5-SS03-04 08/24/93	S03-04 3	SB6 PC-P1-SB6-SS03-04 08/24/93	S03-04 3
.7	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Nitrobenzene	ug/kg	340	n	340	Ω	380	n	390	ם	360	D	380	D
Pentachlorophenol	ue/ke	830	D	830	ב	930	D	950	D	880	Þ	930	Ω
Phenanthrene	ug/kg	340	n	340	Ω	380	n	390	D	360	Þ	380	n
Phenol	ug/kg	340	Þ	340	Ω	380	D	390	Ω	360	Ω	380	n
Pyrene	ug/kg	340	Ω	340	Ω	380	Þ	390	D	360	Ω	380	D
bis(2-Chloroethoxy)methane	ug/kg	340	Ω	340	ח	380	n	390	ם	360	D	380	D
bis(2-Chloroethyl) ether	ug/kg	340	Ω	340	Ω	380	D	390	ם	360	D	380	D
bis(2-Ethylhexyl)phthalate	ug/kg	340	Ω	340	D	380	D	390	n	360	D	380	Ω
METALS													
	mo/ko	1480		808		•		•		•		•	
Antimony	ma/ko	4 70	111	4 70	111	\$ 30	H	5.30	TI.	4.90	n	5.20	Th.
Arsenic	me/ke	0.48		0.57	0	1.70		0.47	þ	0.44		0.47	
Barium	mg/kg	4.20		2.30	· C	,		٠		•		1	
Beryllium	mg/kg	0.42		0.42	ò	0.47	n	0.47	Ω	0.44		0.47	D
Cadmium	mg/kg	0.53	D	0.53	Ω	0.58	UL	0.59	ΩΓ	0.55	'n	0.58	
Calcium .	mg/kg	160		30800		ı		í		•		•	
Chromium	mg/kg	2.80	_	2.10		4.50		2.90		2.70		1.40	
Chromium, Hexavalent	l/gm	•		•		0.01	D	0.01	D	0.01	Þ	0.01	D
Cobalt	mg/kg	0.95		0.95	ם ו	• ;		1 ,	:			, ,	
Copper	mg/kg	1.60	D 0	1.60		2.60		1.80	<b>-</b>	09.1	<b>-</b>	0.1	<b>-</b>
Iron	mg/kg ~~∩.~	18/0	_	1620		7	۵	- 1		1 30	_	- 0	
Merica	Sylvania Sylvania	433	``.	4470		) -		0:-					
Manganese	me/ke	21.90		36		•		,		٠		•	
Mercury	mg/kg	0.11	n	0.11	ם	0.12		0.12	ם	0.11	D	0.11	D
Nickel	mg/kg	3.70	Ω (	3.70	ח	4.10	D	4.10	D	3.8	D (	4.10	D (
Potassium	mg/kg	240		241		ı		•		•		•	
Selenium	mg/kg	0.32		0.32		0.63		0.36	<b>&gt;</b>	0.33		0.35	
Silver	mg/kg	0.42	0 C	0.42		0.47	Π	0.47	ב	0.44	D +	0.47	n ′
Sodium	mg/kg	30.20		48.80		•		,		•		•	
Thallium	mg/kg	0.32		0.32	ר	0.35	Ωľ	0.36	Þ	0.33	n	0.35	מ
Vanadium	mg/kg	3.60	0	3.30		1		•		•		•	
Zinc	mg/kg	3.80		3.80	<b>m</b>	9.60	m	4.20	æ	3.80	<b>m</b>	6.10	<b>m</b>
TPH		;		;		•		•				•	
Total Petroleum Hydrocarbons	mg/kg	11.30	0	01		14.10		12.40		29.70	•	0.30	<b>-</b>

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

Number of the proposed by th	LOCATOR: SAMPLE ID: COLLECTION DATE:	VTOR: JE ID: JATE:	SB7 PC-P1-SB7-SS03 08/24/93	S03-04	SB8 PC-P1-SB8-SS03-04 08/24/93	SS03-04 93	SB9 PC-P1-SB9-SS03-04 08/24/93	.SS03-04	SB10 PC-P1-SB10-SS03-04 08/24/93	503-04	SB11 PC-P1-SB11-SS03-04 08/24/93	\$\$03-0 <b>4</b>	SB13 PC-P1-SB13-SS03-04 08/24/93	3 -SS03-04 193	₩
the continue suggles 1.10 to to 1.10 to 1.1 to 0.05 to	<b>i</b>	NITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL		QUAL	RESULT	QUAL	RESULT	QUAI	د
mine         wifting         1.10         U         1.10 <td>0.1</td> <td></td>	0.1														
wife of the color of	I, I, 2-Tetrachloroethane	ug/kg	1.10		1:1	O O	-	D	-	n	1			0.	<b>5</b>
wights         0.73         U         0.65         U         0.65         U         0.65         U         0.65         U         0.65         U         0.65         U         0.73         U         0.73         U         0.74         U         0.75         U	I, I-Trichloroethane	ug/kg	0.11		0.3	3 B	0.0	а 6	2.20		1.4	_	0.2	6	<b>~</b>
The color of the		ug/kg	0.73		0.7		0.6	O 69	0.69	D	0.70	n	0.7	•	5
ug/kg         1051         U         0.86         U         0.86         U         0.87         U         0.94           ug/kg         1.10         U         1.20         U         1.20         U         0.98         U         0.98         U         0.98         U         0.98         U         0.99         U         0.99         U         1.10		ug/kg	-	ם	-	Ω	9.0	O 86	0.98	ם	0.9	D	1.1		5
wig/kg         11         U         110         U         0.98         U         0.98         U         0.98         U         110         U         <		ug/kg	0.9		0.8		0.8	n 98	0.86	ם	0.8	<b>D</b>	0.6		<b>5</b>
ug/kg         1.10         U         1.20         U	<u>e</u>	ug/kg	-		-		0.9		0.98	n	0.9	-	=		ם
ug/kg         1.60         U         1.50         U         1.50         U         1.50         U         1.60         U         1.50         U         1.30         U         1.40         U         1.30         U         1.30         U         1.40         U	2,3-Trichloropropane	ug/kg	1.10				1	Ω		ם	-		=		ם
ug/kg         1.70         U         1.70         U         1.60         U         1.60         U         1.80         U		ug/kg	1.6		1.5		7	O O	1.50	D	1.5(	D (	1.6	09	n
ug/kg         0.79         U         0.77         U         0.75         U         0.76         U         0.81           ug/kg         1.30         U         1.30         U         1.30         U         1.30         U         1.40           ug/kg         1.30         U         1.30         U         1.30         U         1.30         U         1.40           ug/kg         1.30         U         1.30         U         1.30         U         1.40         U         1.40           ug/kg         1.70         U         1.30         U         1.30         U         1.40         U         1.40           ug/kg         1.70         U         1.30         U         1.30         U         1.40         U         1.40           ug/kg         1.70         U         1.30         U         1.30         U         1.40         U         1.40           ug/kg         1.70         U         1.30         U         1.30         U         1.30         U         1.40         U         1.40           ug/kg         1.30         U         1.30         U         1.30         U         1.30		ug/kg	1.7		1.7		1.0	n 09	1.60	n	1.6	_	1.5	02	n
ug/kg         0.79         U         0.77         U         0.75         U	2-Dichloroethane	ug/kg	0.7		0.7		0.	U 27	0.75	D	97.0	_	9.0	31	<b>5</b>
ug/kg         1.30         U         1.30         U         1.30         U         1.40         U	2-Dichloropropane	ug/kg	0.7		0.7		0	U 27	0.75	n	0.7		0.6		b
ug/kg         130         U         130         U         130         U         130         U         140         U         150         U	2-trans-Dichloroethylene	ug/kg	1.3		1.3		1	30 U	1.30	Ω	1.3		1,		b
ug/kg         1.20         U         1.10         U         1.20         U	-Dichlorobenzene	ug/kg	<u></u>		1.3			30 U	1.30	5	1.3	<b>n</b> (	-	10	5
ug/kg         1         U         1         U         0.98         U         0.99         U         1.10           ug/kg         1.70         U         1.60         U         1.60         U         1.60         U         1.60         U         1.80	-cis-Dichloropropylene	ug/kg	1.2		=		-		1.10	n	1.1	D (	::		ם
ug/kg         1.70         U         1.60         U         1.60         U         1.80         U         1.40         U	-trans-Dichloropropylene	ug/kg	-		-		0.0		0.98		6.0		-	-	Þ
ug/kg         1.30         U         1.30         U         1.30         U         1.40         U         1.20         U	-Dichlorobenzene	ng/kg	1.7		1.3				1.60	_	1.6		-		Þ
ug/kg         1.20         U         1.20         U         1.10         U         1.20         U         1.30         U         1.30         U         1.40         U         1.10         U	hloroethylvinyl ether	ng/kg	1.3	<b>D</b> 0	1.3		Ξ.	-	1.30		1.3		ì		Þ
ug/kg         1.30         U         1.30         U         1.30         U         1.30         U         1.30         U         1.40           ug/kg         1.30         U         1.30         U         1.30         U         1.30         U         1.40         U         1.10	Chlorotoluene	ng/kg	1.2		1.2		-		1.10		1.2		<u>:</u>		Þ
ug/kg         0.91         U         0.86         U         0.86         U         0.86         U         0.87         U         0.94           ug/kg         1.10         U         1.10	Thiorotoluene	ug/kg	1.3	_					1.30		 E. :		à		<b>)</b>
ug/kg         1.10         U	ymobenzene	ug/kg	6.0	n :	~. O		Õ·		0.86		8.0·		·		<b>-</b> :
ug/kg         1.20         U         1.10         U	omochioromethane	ug/kg	- :		Ξ.						- •				<b>&gt;</b> :
ug/kg         1.10         U	omodichioromethane	ug/kg	7.7				<u>-</u> i -		01.1		1.2		<u>-</u>		<b>&gt;</b>
ug/kg         1.10         U	Amount	SA/KB	1.1				<b>-</b> C		7.0		70		i c	2 5	<b>=</b>
ug/kg         3.20         U         3.10         U         3         U         3         U         3         U         3         U         3.20           ug/kg         0.88         B         0.89         B         1.40         B         0.81         B         0.65         B         0.54           ne         ug/kg         0.98         U         0.95         U         0.92         U         0.92         U         0.93         U         1.10           e         ug/kg         3.40         U         1.10         U         1         U         1         U         1.10           e         ug/kg         3.40         U         3.20         U         2.90         U         2.90         U         2.90         U         3.30         U         3.10         4.70           ride         ug/kg         3.80         B         1.0         8.70         4.70           s         0.98         U         0.92         U         0.92         U         0.93         U         1.10           ug/kg         3.20         U         0.92         U         0.92         U         0.93         U	lombenzene	us/kg			; <del>-</del>		; <b>-</b>				-		; <b>-</b>	. 2	, p
ug/kg         0.88         B         0.89         B         1.40         B         0.81         B         0.65         B         0.54           ug/kg         0.98         U         0.95         U         0.92         U         0.92         U         0.93         U         1           ug/kg         3.40         U         1.10         U         1         U         1         U         1.10           ug/kg         3.40         U         3.30         U         3.20         U         3.20         U         3.30         U         1.10           ug/kg         3.80         B         7.70         U         3.90         B         10         8.70         U         4.70           ug/kg         0.98         U         0.95         U         0.92         U         0.92         U         0.93         U         1           ug/kg         0.98         U         0.95         U         0.92         U         0.92         U         0.93         U         1           ug/kg         3.20         U         3.20         U         3.20         U         0.93         U         1	oroethane	ug/kg	3.2				m	Ω	m	Þ	m	D	'n	70	ם
ug/kg         0.98         U         0.95         U         0.92         U         0.92         U         0.93         U         1           ug/kg         1.10         U         1.10         U         1.10         U         1         U         1         U         1.10           ug/kg         3.40         U         3.30         U         3.20         U         3.30         U         3.50           ug/kg         5.80         B         7.70         U         3.90         B         10         2.90         U         2.90         U         3.10           ug/kg         0.98         U         0.95         U         0.92         U         0.92         U         0.93         U         1           ug/kg         0.98         U         0.95         U         0.92         U         0.93         U         1           ug/kg         3.20         U         3         U         3         U         3.20	loroform	ug/kg	0.8		0.0		<b></b>		0.81	<b>B</b>	9.0		0	54	B
ug/kg         1.10         U         1.10         U         1         U         1         U         1.10           ug/kg         3.40         U         3.30         U         3.20         U         2.90         U         2.90         U         2.90         U         3.50           ug/kg         5.80         B         7.70         U         3.90         B         10         8.70         U         3.10           ug/kg         0.98         U         0.95         U         0.92         U         0.92         U         0.93         U         1           ug/kg         3.20         U         0.92         U         0.92         U         0.93         U         1           ug/kg         3.20         U         3.10         U         3         U         3.20	promochloromethane	ug/kg	0.0	_	0.0	_	0.		0.92		6.0	-			D
ug/kg         3.40         U         3.30         U         3.20         U         3.30         U         3.50           ug/kg         5.80         B         7.70         U         3.90         B         10         2.90         U         2.90         U         3.10           ug/kg         0.98         U         0.95         U         0.92         U         0.92         U         0.93         U         1           ug/kg         3.20         U         3.10         U         3         U         3.20	promomethane	ug/kg	1:1		-		1		-		-	D	<b></b>	10	n
ug/kg         3         U         2.90         U         2.90         U         2.90         U         3.10           ug/kg         5.80         B         7.70         U         3.90         B         10         8.70         4.70           ug/kg         0.98         U         0.95         U         0.92         U         0.93         U         1           ug/kg         3.20         U         3.10         U         3         U         3.20	ethyl bromide	ug/kg	3.4		3		3.		3.20		3.3		e,	50	n
ug/kg         5.80         B         7.70         U         3.90         B         10         8.70         4.70           ug/kg         0.98         U         0.95         U         0.92         U         0.92         U         0.93         U         1           ug/kg         3.20         U         3.10         U         3         U         3         U         3.20	ethyl chloride	ug/kg	8		3		2.		2.90		2.9		ë.	10	ם
ug/kg         0.98         U         0.95         U         0.92         U         0.92         U         0.93         U         1           ug/kg         0.98         U         0.95         U         0.92         U         0.92         U         0.93         U         1           ug/kg         3.20         U         3.10         U         3         U         3         U         3.20	ethylene chloride	ug/kg	5.8		7.		3.		10		8.7	0	4	20	<u>-</u>
ug/kg 0.98 U 0.95 U 0.92 U 0.92 U 0.93 U 1 ug/kg 3.20 U 3.10 U 3 U 3 U 3.20	trachloroethylene	ug/kg	0.0		0		Ö		0.92		0.0		1		D
ug/kg 3.20 U 3.10 U 3 U 3 U 3.20	chloroethylene	ug/kg	0.0		0		0		0.92		0.0				D
	nyl chloride	ug/kg	3.2		3.		3	Ω	9		ဗ	n	3.	70	D

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

SB13 PC-PI-SB13-SS03-04 08/24/93 RESULT QUAL 1.80 U 1.50 U 2.20 U 2.20 U 2.20 U 1.90 U 1.90 U 410 U	0000
28 08 7 1	
SB 08/2-1-SBI 08/2-1-SBI 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	410 410 990 410 410
803-04  QUAL  QUAL  U  U  U  U  U  U  U  U  U  U  U  U  U	
SB11 PC-P1-SB11-SS03-04 08/24/93 RESULT QUAL 1.60 U 1.40 U 1.40 U 2.10 U 2.10 U 2.10 U 2.10 U 1.50 U 3.70 U 3.80 U	380 380 920 380 380
S03-04  QUAL  QUAL  U  U  U  U  U  U  U  U  U  U  U  U  U	
SB10  O8/24/93  RESULT QUAL  1.60 U  1.40 U  1.40 U  2.10 U  2.10 U  2.10 U  2.10 U  1.70 U  1.70 U  380 U	380 380 920 380 380
203-04 QUAL QUAL U U U U U U U U U U U U U U U U U U	
SB9 08/24/93 08/24/93 ULT QI 0.08 0.16 0.16 0.47 0.47 0.47 1.70 0.46 380 380 380 380 380 380 380 380 380 380	380 380 920 380 330
SB9 PC-P1-SB9-SS03-04 08/24/93 RESULT QUAI 0.08 0.08 0.16 B 2.10 U - 1.60 U 0.47 U 0.47 U 0.47 U 0.47 U 0.46 J 3.70 U 3.80 U 3.8	<i></i>
OUAL B B C C C C C C C C C C C C C C C C C	
88 47938 47938 100 1.10 1.10 1.10 1.10 1.10 1.10 1.10	390 390 390 390
803-04  QUAL  QUAL  U  U  U  U  U  U  U  U  U  U  U  U  U	
SB7 08/24/93 RESULT QUAI 1.70 U 0.09 B 2.20 U 2.20 U 2.20 U 2.20 U 0.05 0.06 0.06 0.06 0.06 0.06 0.06 0.06	400 400 400 400 400
00/00/00/00/00/00/00/00/00/00/00/00/00/	ug/kg ug/kg ug/kg ug/kg
LOCATOR: SAMPLE ID: SAMPLE ID: UNITS: UNITS: USKg USKg USKg USKg USKg USKg USKg USKg	
COLLJ  2.Dichlorobenzene 3Dichlorobenzene 3.1.4-Dimethylbenzene 3.1.4-Dichlorobenzene 3.2-Dichlorobenzene 3.2-Dichlorobenzene 3.2-Dichlorophenol 3.4-Dichlorophenol 3.4-Dichlorophenol 3.4-Dimitroplenol 3.4-Dim	alene alene nzidine
920  2Dichlorobenzene 3Dichlorobenzene 3.1.4-Dimethylbenzene 3.1.4-Dimethylbenzene 3.1.4-Dimethylbenzene 4.4-Dichlorobenzene 5.2-Dichlorobenzene 5.2-Dichlorobenzene 5.2-Dichlorobenzene 6.2-Dichlorobenzene 7.2-Dichlorobenzene 7.2-Dichlorobenzene 7.2-Dichlorobenzene 7.3-Dichlorobenzene 7.3-Dichlorobenzene 7.3-Dichloropheno 7.4-Dichloropheno 7.4-Dinitropheno 7	Inaphth Iphenol niline henol hlorobe
COLLEC  8020 1.2-Dichlorobenzene 1.3-Dichlorobenzene 1.3-Dichlorobenzene 1.3-Dichlorobenzene 1.3-Dichlorobenzene 1.4-Dimethylbenzene 1.4-Dichlorobenzene 1.4-Dichlorobenzene Ehrlybenzene Ehrlybenzene Ehrlybenzene Ehrlybenzene Chlorobenzene Ehrlybenzene 2.7-Dichlorobenzene 1.2-Dichlorobenzene 1.2-Dichlorobenzene 1.2-Dichlorobenzene 1.3-Dichlorobenzene 1.4-Dichlorobenzene 1.4-Dichlorobenzene 1.4-Dichlorobenzene 1.4-Dichlorobenzene 1.4-Dichlorobenzene 1.4-Dichlorobenzene 1.4-Dichlorobenzene 1.4-Dichlorobenzene 1.4-Dichlorobenzene 1.4-Dichlorophenol 2.4-Dimitrotoluene 2.6-Dimitrotoluene	2-Methylnaphthalene 2-Methylphenol 2-Nitroaniline 2-Nitrophenol 3.3'-Dichlorobenzidine

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

0-02	QUAL	:	э;	>	Þ		ם	Þ	;	Þ	Þ	Þ	n	Þ	Ω	;	Þ	<b>&gt;</b>	Þ	ם	Þ	ם	ם	Þ	ם	Þ	Þ	Þ	Þ	D	Þ	D	Þ	Þ	Þ	n
SB4 PC-MP2-SB4-SS00-02 08/17/93	RESULT QU		05.1	1.30	1.90		3.30	1.90	• .	1.50	1.90	1.90	=	1.60	5.50	,	340	340	340	340	340	830	340	340	340	830	340	340	340	340	830	340	340	830	340	340
	QUAL RI	:	<b>&gt;</b>	Þ	D		D	ם	;	Þ	ם	ם	n	Ω			) D	ם	D	D	Þ	D	ם	ם	ם	ם	ם	D	ם	D	D	ם	Ω	D	n	D
SB3 PC-MP2-SB3-SS05-07 08/17/93	RESULT (	•	1.40	1.20	1.90	•	3.30	1.90	•	1.40	1.90	1.90	=	1.50	0.17		340	340	340	340	340	820	340	340	340	820	340	340	340	340	820	340	340	820	340	340
	QUAL	:	<b>&gt;</b> :	>	Ω		Ω	ם		<b>=</b>	n	D	n	ם	D		n	D	Þ	n	Ω	ם	ם	n	Ω	Þ	n	n	Þ	n	D	n	Ω	Þ	ם	Þ
SB3 PC-MP2-SB3-SS04-05 08/17/93	RESULT Q	•	1.40	1.20	1.90		3.30	1.90		1.40	1.90	1.90	11	1.50	5.50		340	340	340	340	340	820	340	340	340	820	340	340	340	340	820	340	340	820	340	340
	QUAL	:	>	ם	Þ		Ω	D		Þ	ם	n		ם			D	n	ם	n	D	D	ם	ם	n	n	ם	n	n	Ω	n	Ω	n	n	n	D
SB3 PC-MP2-SB3-SS00-02 08/17/93	RESULT		1.40	1.20	1.80		3.20	1.80	•	1.40	1.80	1.80	11	1.50	5.30		340	340	340	340	340	820	340	340	340	820	340	340	340	340	820	340	340	820	340	340
	QUAL	;	<b>&gt;</b>	n	D		Ω	Ω		Þ	ם			ב			ם	Ω	n	ם	n	n	Ω	n	D	n	Þ	Þ	n	D	n	n	Ω	Þ	n	Ω
SB2 PC-MP2-SB2-SS04-05 08/17/93	RESULT	:	1.40	1.20	1.90		3.30	1.90	•	1.40	1.90	1.90	11	1.50	5.50		340	340	340	340	340	820	340	340	340	820	340	340	340	340	820	340	340	820	340	340
	QUAL	·	Þ	n	ם		D	D		D	Þ	Þ	n	n	n		n	D	ם	D	n	D	Ω	D	D	n	n	n	Þ	D	ב	Þ	D	n	Þ	Ω
SB2 PC-MP2-SB2-SS00-02 08/17/93	RESULT Q	,	1.50	1.30	1.90	•	3.40	1.90	•	1.50	1.90	1.90	12	1.60	5.60		350	350	350	350	350	840	350	350	350	840	350	350	350	350	840	350	350	840	350	350
	UNITS:		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ng/kg	ug/kg	ug/kg
LOCATOR: SAMPLE ID: COLLECTION DATE:		8020	,2-Dichlorobenzene	,2-Dimethylbenzene	,3-Dichlorobenzene	,3-Dimethylbenzene	,3/1,4-Dimethylbenzene	,4-Dichlorobenzene	,4-Dimethylbenzene	Benzene	Chlorobenzene	Ethylbenzene	Methyl-t-Butyl Ether	Styrene	Toluene	CLP 3/90	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	I.3-Dichlorobenzene	.4-Dichlorobenzene	2.2"-Oxybis(1-Chloropropane)	2.4.5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methyl-4,6-Dinitrophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine
		8		<del>_</del>		-		<u>-</u>	_	ďΩ	Ü	回	Σ	Š	Ĥ	Ü	<b>–</b>	Ţ,			′	4	. 7	4	4	7	ų	4	Ġ	4	7	2	C	· C	i Ci	സ

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

Nicriciantenicial market and a control of the contr		COLLECTION DATE:	PC-P1-SB7-SS0 08/24/93	03-04	PC-P1-SB8-SS03-04 08/24/93	303-04	PC-P1-SB9-SS03-04 08/24/93	SS03-04 93	PC-P1-SB10-SS03-04 08/24/93	SS03-04	PC-P1-SB11-SS03-04 08/24/93	SS03-04 3	PC-P1-SB13-SS03-04 08/24/93	-SS03-0 93	4
ug/kg         400         U         390         U         380         U         380         U         410           ug/kg         300         U         300         U         380         U         380         U         380         U         410           ug/kg         400         U         300         U         380         U         380         U         380         U         400           ug/kg         400         U         390         U         380         U         380         U         410         1           ug/kg         400         U         390         U         380         U         380         U         410         1           ug/kg         400         U         390         U         380         U         380         U         410         1           ug/kg         400         U         390         U         380         U         380         U         410         U           ug/kg         400         U         390         U         380         U         380         U         410         U           ug/kg         400         U         3	Nitrobenzene	JNITS:		QUAL		QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUA	,
wig/kg         400         U         350         U         360         U         360         U         400         U <th< th=""><th></th><th>ug/kg</th><th>400</th><th>Ω</th><th>390</th><th>D</th><th>380</th><th>n</th><th>380</th><th>n</th><th>380</th><th>D</th><th>410</th><th>_</th><th>Þ</th></th<>		ug/kg	400	Ω	390	D	380	n	380	n	380	D	410	_	Þ
wig/kg         400         U         390         U         380         U         380         U         410         U           wig/kg         400         U         390         U         380         U         380         U         380         U         410         U           wig/kg         400         U         390         U         380         U         380         U         380         U         410         U           wig/kg         400         U         390         U         380         U         380         U         410         U           wig/kg         400         U         390         U         380         U         380         U         410         U           wig/kg         400         U         390         U         380         U         380         U         410         U </th <th>Pentachlorophenol</th> <th>ug/kg</th> <th>086</th> <th>n</th> <th>950</th> <th>n</th> <th>920</th> <th>D</th> <th>920</th> <th>Ω</th> <th>920</th> <th>ם</th> <th>066</th> <th>_</th> <th>Þ</th>	Pentachlorophenol	ug/kg	086	n	950	n	920	D	920	Ω	920	ם	066	_	Þ
wig/kg         400         U         3990         U         380         U         380         U         380         U         410         U <t< th=""><th>Phenanthrene</th><th>ug/kg</th><th>400</th><th>D</th><th>390</th><th>D</th><th>380</th><th>D</th><th>380</th><th>ם</th><th>380</th><th>D</th><th>410</th><th></th><th>D</th></t<>	Phenanthrene	ug/kg	400	D	390	D	380	D	380	ם	380	D	410		D
ug/kg         400         U         390         U         380         U         380         U         410         U           ug/kg         400         U         390         U         380         U         380         U         410         U           ug/kg         400         U         390         U         380         U         380         U         410         U           ug/kg         400         U         390         U         380         U         380         U         410         U           ug/kg         400         U         390         U         380         U         380         U         410         U           ug/kg         5.50         UL         5.40         UL         5.20         UL         5.20         UL         5.60         UL	Phenol	ug/kg	400	D	390	ם	380	Þ	380	n	380	Ω	410		þ
ug/kg         400         U         380         U         380         U         380         U         410         U           ug/kg         400         U         390         U         380         U         380         U         410         U           ug/kg         400         U         390         U         380         U         380         U         410         U           ug/kg         5.50         UL         5.40         UL         5.20         UL         5.30         UL         6.30         U         410         U           mg/kg         0.51         U         0.46         U         0.46         UL         0.58         U         0.87         U         6.50         U           mg/kg         0.61         UL         0.67         UL         0.57         UL         0.46         UL         0.38         U         0.62         U	Pyrene	ug/kg	400	D	390	ם	380	Þ	380	D	380	n	410		Þ
ug/kg         400         U         390         U         380         U         380         U         410         U           ug/kg         400         U         390         U         380         U         380         U         410         U           ug/kg         5.50         UL         5.40         UL         5.20         UL         5.20         UL         5.80         U         5.60         U           mg/kg         0.51         0         0.48         U         0.71         0         0.46         U         0.87         U         5.80         U         5.60         U           mg/kg         0.61         UL         0.63         U         0.77         U         0.87         U         0.50         U	bis(2-Chloroethoxy)methane	ug/kg	400	Þ	330	Ω	380	n	380	D	380	D	410		D
mg/kg         5.50         UL         5.40         UL         5.20         UL         5.20         UL         5.50         UL         5.60         UL         5.60         UL         5.60         UL         5.60         UL         5.50         UL         5.60         UL         5.60         UL         5.20         UL         5.20         UL         5.50         UL         5.60         UL </th <th>bis(2-Chloroethyl) ether</th> <th>ug/kg</th> <th>004</th> <th><b>&gt;</b>;</th> <th>390</th> <th><b>:</b></th> <th>380</th> <th><b>:</b></th> <th>380</th> <th><b>:</b></th> <th>380</th> <th><b>:</b></th> <th>410</th> <th></th> <th><b>:</b></th>	bis(2-Chloroethyl) ether	ug/kg	004	<b>&gt;</b> ;	390	<b>:</b>	380	<b>:</b>	380	<b>:</b>	380	<b>:</b>	410		<b>:</b>
Householder   Market   Marke	bis(2-Ethylhexyl)phthalate	ug/kg	904	>	390	>	380	>	380	>	380	>	<b>4</b> 10		<b>&gt;</b>
mg/kg         5.0         UL         5.0         UL         5.0         UL         5.30         UL         5.50         UL         6.87         UL         6.90         UL         6.90         UL         6.91         UL         6.87         UL         6.87         UL         6.92         UL         6.92         UL         6.92         UL         6.90         UL	METALS														
Marking   Marking   S.50   UL   S.40   UL   S.20   UL   S.20   UL   S.50   UL   UL   UL   UL   UL   UL   UL   U	Aluminum	mø/kø	•		•		1		•		•		•		
Market   M	Antimony	mg/kg	5.50	UF	5.40		5.2		5.20		5.30		5.6		Þ
mg/kg         - <td>Arsenic</td> <td>mg/kg</td> <td>0.51</td> <td>0</td> <td>0.48</td> <td></td> <td>0.7</td> <td></td> <td>0.46</td> <td></td> <td>0.87</td> <td></td> <td>0.5</td> <td></td> <td>ב</td>	Arsenic	mg/kg	0.51	0	0.48		0.7		0.46		0.87		0.5		ב
Hexavalent	Barrum	mg/kg	•	,	1		•		•		•		•		
Marking   Mark	Beryllium	mg/kg	0.49	D	0.48		0.4		97.0		0.47		÷0		þ
Market   M	Cadmium	mg/kg	0.61	Π	09.0		0.5		95.0		35.0		0.0		n
Hexacolon   mg/kg   3.50	Calcium	mg/kg	٠				•		•		•		•		
mg/kg	Chromium	mg/kg	3.50		1.30		4.7	0	2.1(		3.7		3.:	0	_
The color   The	Chromium, Hexavalent	mg/l	0.01	Ω	0.01		0.0		0.0		0.0		).0	1	D
The color of the	Cobalt	mg/kg	•		1		1		•		•		•		
Marke	Copper	mg/kg	1.80	D	1.80		1.7		1.7		1.8		<b>:</b>	8	n
Sistem	Iron	mg/kg	•		,		•		,		•		•		
mg/kg	pag_	mg/kg	1.90		-		m		0.9		2.3	<b>-</b> 0	<b>:</b>	8	¥
mg/kg	Magnesium	mg/kg	•		Ì		•		•		•		•		
mg/kg   0.12   U   0.13   U   0.14   U   0.15   U   U   U   U   U   U   U   U   U	Manganese	mg/kg	, ,		•		•				• •		1 (		;
Signature   Figure	Mercury	mg/kg	0.12		0.12		 		0.1	,	1.0		<b>-</b>		<b>-</b> :
Start	Nickel	mg/kg	4.20		4.20		4		4	70	4.1.		4.		<u>.</u>
m mg/kg 0.49 U 0.48 U 0.46 U 0.46 U 0.47 U 0.50 U 47.40	Coltain	A Sur	- 0 36		200		, ,		, 6		' 6		י כ		=
m mg/kg		# K	0.30		0.30				5.0				òò		į :
m mg/kg	DIIVEI.	mg/kg	0.49		54.5		•		4.0		<b>†</b> .0		÷		>
dium mg/kg	Zhelling.	mg/kg	7.0		25.0		' (		· 6		• 6				=
mg/kg         4.70         B         2.50         B         5.70         B         3.50           Petroleum: Hydrocarbons         mg/kg         9.70         14.30         32.50         9.50         6.30         U         47.40	Vanadium	mg/kg mg/kg	00.0		) r.v		· ·		ָרָיָּ פּיָּ		ָרָיָּהָ י				į
Petroleum Hydrocarbons mg/kg 9.70 14.30 32.50 9.50 6.30 U 47.40	Zinc	mo/ko	4.70		2.50		, ,		er.	~	4			20	2
Petroleum Hydrocarbons mg/kg 9.70 14.30 32.50 9.50 6.30 U		<b>0</b>	•				5		)	1	•			2	1
mg/kg 9.70 14.30 32.50 9.50 6.30 U	ТРН														
	Total Petroleum Hydrocarbons	mg/kg	9.70		14.30	_	32.	δ.	9.5	0	6.3			<b>ફ</b>	

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

SB4 PC-MP2-SB4-SS00-02 08/17/93	RESULT QUAL	0.94	0.41	0.63	0.89																															
SE C-MP2-SI 08/1′		O	0	0	- 77	0.78	0.89	.94	1.40	.50	89.	89.	.10	1.10	66.	.89	1.50	01.1		<u>0</u>	0.78	0.94	- 6	***	0.00	2.70	0.32	0.83	0.94	2.90	2.60	2.40	0.83	0.83	2.70	
ď.	. 1				0				-	-	0	•	_	-	0	0	-	_												•		•				
S05-07	QUAL	D	æ	ם	ח	) <b>(</b>	) <b>=</b>	o D	D	Ω	Þ	Ω	D	n	D	ם								<b>&gt;</b> :								8	D	<b>D</b>	n	
SB3 PC-MP2-SB3-SS05-07 08/17/93	RESULT	0.93	0.38	0.62	0.88	0.77	0.88	0.93	1.30	1.40	19.0	19.0	1.10	1.10	0.98	0.88	1.40	1.10	-	1.10	0.77	0.93	1	0.93	0.0	07.0	0.47	0.82	0.93	2.90	2.60	1.40	0.82	0.82	2.70	
04-05	QUAL	Þ	<u> </u>	<b>-</b>	=	=	=	<b>&gt;</b> >	ם	D	Þ	D	כ	ם	Þ	n	D	ב	n	ם	ב	ב	<b>:</b>	<b>&gt;</b> :	<b>-</b> :	<b>:</b>	2 4	=	=	=	ם ב	<b>m</b>	ב	D	n	
SB3 PC-MP2-SB3-SS04-05 08/17/93	RESULT	0.93	0.50	0.62	88.0	0.00	\/.O	0.93	1.30	1.40	0.67	19'0	1.10	1.10	0.98	0.88	1.40	1.10	-	1.10	0.77	0.93		0.93	0.67	0.50	6.70	0.87	0.02	0.90	2.60	1.40	0.82	0.82	2.70	
	QUAL	Þ	) =	) =	> <b>=</b>	) <b>=</b>	> =	=	ם כ	'n	n	Ω	D	D	Þ	D	ם	n	ם	Ω	n	D	ב כ	<b>&gt;</b> :	<b>:</b>	<b>)</b>	۵ د	۽ ۵	<b>=</b>	=	=	, α	כו	n	=	)
SB3 2-SB3-SS0 08/17/93		0 0	2 80	190	10.0	76.0	0.70	0.00	1.30	1.40	99.0	99.0	1.10	1.10	0.97	0.87	1.40	1.10	-	1.10	0.77	0.92	-	0.92	0.66	76.0	7.00	0.50	70.0	26.0	2 50	80	0.82	0.82	2,60	
SB3 PC-MP2-SB3-SS00-02 08/17/93	RESULT																																			
S04-05	QUAL	E	, A	a =	<b>:</b>	) <b>:</b>	) <b>:</b>	<b>=</b>	=	) [	o ח	o D	ר	D	n	U	D	n	U	D	U	Ω					<b>.</b>						-			
SB2 PC-MP2-SB2-SS04-05 08/17/93	RESULT	0.03	0.50	0.50	70.0	0.88	0.77	0.88	1.30	1.40	0.67	0.67	1.10	1.10	0.98	0.88	1.40	1.10	-	1.10	0.77	0.93	-	0.93	0.67	0.93	2.70	0.31	0.62	0.93	2.50	00.7	0.82	0.87	20:0	7.7
100-02	QUAL	=	9 6	۽ ۵	<b>:</b>	<b>:</b>	<b>&gt;</b> :	<b>&gt;</b>	<b>=</b>	=	=	) <b>=</b>	=	כ	=	ם ח	ח	ם	ם	n	Ω	ם	n	D	ם	<b>D</b> :	) ·	Δ;	<b>)</b> ;	<b>&gt;</b>			a <u>=</u>	) <b>=</b>	•	•
LOCATOR: SB2 SAMPLE ID: PC-MP2-SB2-SS TION DATE: 08/17/93	RESULT	900	0.93	0.30	0.03	0.89	0.79	0.89	1.40	0 <del>.</del> 1	89.0	99.0	1 20	1.20	<u>.</u>	0.89	1.50	1.20	1.10	1.20	0.79	0.95	1.10	0.95	0.68	0.95	2.70	0.56	0.84	6.93	2.90	7.20	0.2.7	10:0	6.0	7.70
LOCATOR: AMPLE ID: 1	UNITS:		ug/kg	ng/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	SA/Sn	84/8n	24/2n	94/94	110/kg	10//40	110/kg	ug/kg	ue/ke	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg "	ug/kg	ug/kg	9 4 4 4 5 5 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5	9 1	ng/kg	ug/kg
LOCATOR: SAMPLE ID: COLLECTION DATE:	<b>D</b>															•	•																			
COLI		8010	1,1,1,2-1 etrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethylene	1,2,3-Trichloropropane	1,2-Dibromoemane	1,2-Dichlorobenzene	1,2-Dichloroemane	1,2 Dichlocostruland	1,2-Halls-Dichlordenzene	1.3 of Dichlomanosulana	1.3 trans. Dichlomorronvlane	1,3-flaus-Dichloroperene	2-Chloroethylvinyl ether	2-Chlorotoluene	4.Chlorotolinene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Вготобогт	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Dibromochloromethane	Dibromomethane	Methyl bromide	Methyl chlonde	Methylene chloride	letracinotoemiyiene	Inchloroethylene	Vinyl chloride

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

LOCATOR: SAMPLE ID:		SB2 PC-MP2-SB2-SS00-02	-SS00-02	SB2 PC-MP2-SB2-SS04-05	SS04-05	SB3 PC-MP2-SB3-SS00-02	.SS00-02	SB3 PC-MP2-SB3-SS04-05	SS04-05	SB3 PC-MP2-SB3-SS05-07	SS05-07	SB4 PC-MP2-SB4-SS00-02	SS00-02
COFFECTI	ON DAIE:	6/11/00	2	00/1/0	n	671/00	2	6// 1/00	2	6111100	9	2/1/90	2
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
3-Nitroaniline	ug/kg	840	Ω	820	Ω	820	D	820	D	820	D	830	Ω
4-Bromophenyl phenyl ether	ug/kg	350	Þ	340	D	340	D	340	D	340	ם	340	ם
4-Chloro-3-methyl phenol	ug/kg	350	D	340	Ω	340	Þ	340	Ω	340	Þ	340	D
4-Chloroaniline	ug/kg	350	Ω	340	ר	340	D	340	ם	340	n	340	D
4-Chlorophenyl phenyl ether	ug/kg	350	Ω	340	D	340	Ω	340	n	340	Þ	340	Þ
4-Methylphenol	ug/kg	350	Ω	340	D	340	D	340	n	340	Þ	340	D
4-Nitroaniline	ug/kg	840	n	820	Ω	820	Ω	820	Ω	820	D	830	D
4-Nitrophenol	ug/kg	840	Ω	820	n	820	Ω	870	n	820	D	830	ם
Acenaphthene	ug/kg	350	n	340	Ω	340	ם	340	ם	340	D	340	ם
Acenaphthylene	ug/kg	350	n	340	D	340	ם	340	ם	340	ם	340	Ω
Anthracene	ug/kg	350	Ω	340	D	340	D	340	ב	340	Ω	340	Ω
Benzo(a)anthracene	ug/kg	350	n	340	Ω	340	ם	340	ם	340	D	340	Ω
Benzo(a)pyrene	ug/kg	350	ח	340	ם	340	D	340	D	340	D	340	Ω
Benzo(b)fluoranthene	ug/kg	350	D	340	D	340	D	340	D	340	Ω	340	n
Benzo(ghi)perylene	ug/kg	350	D	340	n	340	D	340	Þ	340	D	340	n
Benzo(k)fluoranthene	ug/kg	350	D	340	Ω	340	Ω	340	Þ	340	D	340	n
Butyl benzyl phthalate	ug/kg	350	Þ	340	n	340	D	340	Ω	340	n	340	n
Carbazole	ug/kg	350	n	340	n	340	n	340	Ω	340	n	340	ם
Chrysene	ug/kg	350	Ω	340	ם	340	Ω	340	D	340	Ω	340	ם
Di-n-butyl phthalate	ug/kg	350	Þ	340	Ω	340	D	340	Ω	340	n	340	כ
Di-n-octyl phthalate	ug/kg	350	Ω	340	n	340	D	340	n	340	D	340	ב
Dibenzo(a,h)anthracene	ug/kg	350	n	340	D	340	Ω	340	D	340	O	340	ם
Dibenzofuran	ug/kg	350	n	340	D	340	D	340	n	340	Ω	340	כ
Diethyl phthalate	ug/kg	350	Ω	340	n	340	Ω	340	ם	340	Þ	340	ס
Dimethyl phthalate	ug/kg	350	n	340	Ω	340	n	340	ם	340	Ω	340	D
Fluoranthene	ug/kg	350	n	340	n	340	ם	340	ם	340	D	340	ם
Fluorene	ug/kg	350	Þ	340	ם	340	n	340	n	340	<b>D</b>	340	ם
Hexachlorobenzene	ng/kg	350	Þ	340	Ω	340	D	340	⊃	340	Þ	340	D
Hexachlorobutadiene	ug/kg	350	Þ	340	D	340	D	340	D	340	Þ	340	Þ
Hexachlorocyclopentadiene	ug/kg	350	D	340	D	340	D	340	D	340	Þ	340	ם
Hexachloroethane	ug/kg	350	n	340	Ω	340	ח	340	כ	340	n	340	n
Indeno(1,2,3-c,d)pyrene	ug/kg	350	D	340	D	340	D	340	D	340	P	340	D
Isophorone	ug/kg	350	n	340	D	340	D	340	Þ	340	D	340	D
N-Nitrosodi-N-Propylamine	ug/kg	350	n	340	Þ	340	Þ	340	Þ	340	Þ	340	Ω
N-Nitrosodiphenylamine	ug/kg	350	Þ	340	Þ	340	Ω	340	Ω	340	ם	340	D
Naphthalene	ug/kg	350	D	340	Ω	340	n	340	Ω	340	D	340	ם

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

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COLLEC	LOCATOR: SAMPLE ID: COLLECTION DATE:	SB4 PC-MP2-SB4-SS03-04 08/14/93	SS03-04	SB4 PC-MP2-SB4-SS04-05 08/17/93	SS04-05	SB5 PC-MP2-SB5-SS00-02 08/17/93	-SS00-02 93	SB5 PC-MP2-SB5-SS04-05 08/17/93	SS04-05	SB6 PC-MP2-SB6-SS05-06 08/15/93	SS05-06	SB7 PC-MP2-SB7-SS05-06 08/15/93	.SS05-00	9
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	د.
8010	mo/ko	0.94	16	0 63	=	90 0	=	0	=	70 0	=	96 0		=
1,1,1-Trichloroethane	ug/kg	2.80		2.80	) D	0.34	. 4	0.40	, m	2.80	_	0.0		<b>.</b>
1,1,2,2-Tetrachloroethane	ug/kg	0.63		0.62	O 2	0.63		0.61	Þ	0.63		0.64		ם
1,1,2-Trichloroethane	ug/kg	0.89		0.88	3 O	0.89		0.86		0.89		06.0		D
1,1-Dichloroethane	ug/kg	0.78		0.77		0.79	D 6	0.76	D .	0.78	O C	0.80		ם
1,1-Dichloroethylene	ug/kg	0.89		0.88		0.89	<b>n</b> 6	98.0	Ω ,	0.89	D (	06.0		Þ
1,2,3-Trichloropropane	ug/kg	0.94		0.93	3 O	0.95	s u	0.91	Ω	0.94	n t	96.0		ב
1,2-Dibromoethane	ug/kg	1.40		1.30	n (	1.40		1.30	n (	1.40	n (	1.40		ם
1,2-Dichlorobenzene	ug/kg	1.50		1.40		1.50	_	1.40		1.50		1.50		ם
1,2-Dichloroethane	ug/kg	99.0		0.67	0 /	99.0	n 8	99.0	D :	99.0	2 2	69.0		<b>5</b>
1,2-Dichloropropane	ug/kg	99.0		0.67	7 U	0.68		99.0		99.0	5 C	0.69		n
1,2-trans-Dichloroethylene	ug/kg	1.10		1.10	n o	1.20		1.10		1.10	D C	1.20		Þ
1,3-Dichlorobenzene	ug/kg	1.10		1.10		1.20	m o	1.10		1.10	D C	1.20		ם
1,3-cis-Dichloropropylene	ug/kg	0.99		0.98	n 8	-	Ω	96.0	, n	0.99	D (	•••	-	b
1,3-trans-Dichloropropylene	ug/kg	0.89		0.88	⊃ 8	0.89	<b>n</b> 6	98.0	Ω 2	0.89	n 6	06.0	0	כ
1,4-Dichlorobenzene	ug/kg	1.50		1.40	<b>n</b> 0	1.50	m o	1.40	D (	1.50	Ω (	1.50		D
2-Chloroethylvinyl ether	ug/kg	1.10		1.10	<b>O</b>	1.20		1.10	O (	1.10	D C	1.20	-	Þ
2-Chlorotoluene	ug/kg			-	n	1.10		-	Ω	-	Ω	1.10		Þ
4-Chlorotoluene	ug/kg			1.10	<b>n</b> 0	1.20		1.10	ם כ	1.10		1.20		Þ
Bromobenzene	ug/kg			0.77	7 U	0.79	_	0.76	5 U	0.78		0.80		ם
Bromochloromethane	ug/kg	0.94		0.93	3 n	0.95		0.91	) 	0.94	-	96.0		ם
Bromodichloromethane	a/kg					1.10				-		1.10		D
Bromoform	ng/kg			0.93		0.95		0.91	ם	0.94		96.0		D
Carbon Tetrachloride	ug/kg			0.67		0.68		99.0	9 O	99.0		0.69		ם
Chlorobenzene	ug/kg			0.93		0.95		0.91		0.94		96.0		þ
Chloroethane	ug/kg		_	2.70		2.70		2.60		2.70		2.80		D
Chloroform	ng/kg			0.32		0.41	H B	0.32		0.37		0.54		В
Dibromochloromethane	ug/kg			0.82		0.84	<b>7</b>	0.81		0.83		0.85		D
Dibromomethane	ug/kg			0.93	3 O	0.95	S U	16.0	1 O	0.94	4 C	96:0		Þ
Methyl bromide	ug/kg			2.90	n o	2.90	n 0	2.80		2.90	n 0	æ		D
Methyl chloride	ug/kg		in o	2.60		2.60	n 03	2.50	<b>n</b> 0	2.60	n o	2.70	•	n
Methylene chloride	ug/kg			4.70		2.70	70 B	1.70		7.60	0 38	5.60	9	B
Tetrachloroethylene	ug/kg			0.82	.2 O	0.84	<b>4</b> 2	0.81	1 U	0.83	3 U	0.85		n
Trichloroethylene	ug/kg	0.83		0.82		0.84	14 U	0.81	1 U	0.83		0.85		n
Vinyl chloride	ug/kg	2.70	0.	2.70	<b>n</b> 0,	2.70	02 02	2.60	<b>n</b> 0	2.70	<b>n</b> 0.	2.80	Q	D

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

8	AL.	D	Þ	ח	;	<b>-</b> -	>	Ξ	· =	ם י	n	Þ	В	=	ם מ	Þ	Ω	n	n	ם	D :	<b>&gt;</b>	<b>:</b>	<b>-</b> :	o ;	<b>)</b>	<b>&gt;</b> :	Þ	<b>&gt;</b>	<b>&gt;</b>	<b>&gt;</b>	Þ	Þ	
'-SS05. '93	QUAL	9	0	0	9	2 9	2	ç	2 2	8		8	55																					
SB7 PC-MP2-SB7-SS05-06 08/15/93	RESULT	1.50	1.30	1.90	1 6	3.40	7:1		06:1	1.90	12	1.60	0.25	350	350	350	350	350	840	350	350	350	840	350	350	320	350	840	350	350	840	320	350	
90-508	QUAL	n		ם	:	9	n	=	=	כ	ם		Ø	=	) ⊃	Þ	n	Ω	D	D	ם	n	<b>&gt;</b> :	<b>)</b> ;	<b>&gt;</b> ;	<b>&gt;</b> :	Þ	Þ	ם	ב	Þ	<b>&gt;</b>	Þ	
SB6 PC-MP2-SB6-SS05-06 08/15/93	RESULT	1.50	0.11	1.90	•	3.30	79.0	· -	06:1	1.90	=	0.04	69.0	340	340	340	340	340	830	340	340	340	830	340	340	340	340	830	340	340	830	340	340	
04-05	QUAL	n	D	æ	i	<b>:</b>	>	=	=	o ס	n	Ω	ם	=	) <b>=</b>	ם ס	D	Ω	Ω	D	ר	Þ	<b>&gt;</b>	<b>D</b> :	<b>)</b>	•	Þ	<b>-</b>	ב	ם	Þ	Þ	Þ	
SB5 PC-MP2-SB5-SS04-05 08/17/93	RESULT	1.40	1.20	0.31		3.20	1.80	, -	9:1	1.80	=	1.50	5.40	330	330	330	330	330	810	330	330	330	810	330	330	330	330	810	330	330	810	330	330	
00-03	QUAL	5	5	<b>1</b> 5		5 :	3	111	3 =	3 3	'n	'n	5	-	=	) <b>=</b>	ם	Ω	n	D	ם	n	D	<b>&gt;</b> :	<b>)</b>	<b>&gt;</b>	D	ם	D	Ω	ם	D	D	
SB5 PC-MP2-SB5-SS00-02 08/17/93	RESULT	1.50	1.30	1.90	4 ,	3.40	1.90		06.1	06.1	12	1.60	5.60	350	350	350	350	350	840	350	350	350	840	350	350	350	350	840	350	350	840	350	350	
04-05	QUAL	D	כי	D		<b>&gt;</b> :	<b>D</b>	:	<b>=</b>	=	ם	ם	Ω	F	=	=	ם ס	מ	Ω	n	D	ם	n	n	D	ם	D	D	Ω	n	n	ם	n	
SB4 PC-MP2-SB4-SS04-05 08/17/93	RESULT	1.40	1.20	1.90	•	3.30	1.90	' -	04.1	1.90		1.50	5.50	340	340	340	340	340	820	340	340	340	820	340	340	340	340	820	340	340	820	340	340	
103-04	QUAL	n	5	5		5	5	=	3 E	3 5	5 5	5	B	=	<b>=</b>	=	ò	ם	D	ם	D	O	D	Þ	<b>-</b>	ם	D	ם	Þ	ם	ם	ם	Ω	
SB4 PC-MP2-SB4-SS03-04 08/14/93	RESULT	1.50	1.30	1.90	•	3.30	1.90	' -	1.30	06.1	=	1.60	0.53	340	340	340	340	340	830	340	340	340	830	340	340	340	340	830	340	340	830	340	340	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	119/kg	ug/kg	ug/kg	ug/kg	ng/kg	ug/kg	ug/kg	ug/kg	SW/Sn	nø/kø	ug/kg	ug/kg	1	84/8n 84/2n	ug/kg	ug/kg			ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ng/kg	ug/kg	ng/kg	ng/kg	ug/kg	ug/kg	
COLLE	:	8020 1.2-Dichlombenzene	1.2-Dimethylbenzene	1,3-Dichlorobenzene	1,3-Dimethylbenzene	1,3/1,4-Dimethylbenzene	1,4-Dichlorobenzene	1,4-Dimethylbenzene	Benzene Cl. 1	Ethylkenzene	Methyl-t-Buryl Ether	Styrene	Toluene	CLP 3/90	1,2,4-1 remore enzene	13. Dichlorobanzana	1 4-Dichlombenzene	2.2'-Oxvhis(1-Chloropropane)	2,4.5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methyl-4,6-Dinitrophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

COLLEG	LOCATOR: SAMPLE ID: COLLECTION DATE:	SB4 PC-MP2-SB4-SS 08/14/93	-SS03-04 93	SB4 PC-MP2-SB4-SS04-05 08/17/93	-SS04-05 93	SB5 PC-MP2-SB5-SS00-02 08/17/93	-SS00-02 93	SB5 PC-MP2-SB5-SS04-05 08/17/93	-SS04-05 33	SB6 PC-MP2-SB6-SS05-06 08/15/93	SS05-06	SB7 PC-MP2-SB7-SS05-06 08/15/93	-SS05-06 93
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
3-Nitroaniline	ug/kg	830	D	820	n	840	D	810	n	830	מ	840	Þ
4-Bromophenyl phenyl ether	ug/kg	340	n	340	Ω	350	Ω	330	ם	340	D	350	n
4-Chloro-3-methyl phenol	ug/kg	340	D	340	Ω	350	Ω	330	n	340	Ω	350	ם
4-Chloroaniline	ug/kg	340	n	340	Ω	350	Ω	330	Ω	340	n	350	n
4-Chlorophenyl phenyl ether	ug/kg	340	D	340	n	350	Ω	330	D	340	Ω	350	Þ
4-Methylphenol	ug/kg	340	D	340	Ω	350	Ω	330	Ω	340	Ω	350	D
4-Nitroaniline	ug/kg	830	D	820	Ω	840	Ω	810	D	830	D	840	n
4-Nitrophenol	ug/kg		Ω	820	Ω	840	n	810	n	830	ם	840	n
Acenaphthene	ug/kg	340	Ω	340	Ω	350	Ω	330	Ω	340	D	350	ם
Acenaphthylene	ug/kg	340	Ω	340	ם	350	Ω	330	ם	340	D	350	n
Anthracene	ug/kg	340	Ω	340	D	350	Ω	330	ם	340	D	350	Þ
Senzo(a)anthracene	ug/kg	340	Ω	340	D	350	ח	330	ם	340	n	350	Ð
Senzo(a)pyrene	ug/kg	340	Ω	340	D	350	ם	330	n	340	n	350	ם
3enzo(b) fluoranthene	ug/kg	340	Ω	340	Ω	350	Ω	330	Ω	340	Ω	350	ם
Genzo(ghi)perylene	ug/kg	340	n	340	D	350	n	330	ם	340	Þ	350	ם
Benzo(k)fluoranthene	ng/kg		Ω	340	D	350	D	330	ם	340	D	350	D
Butyl benzyl phthalate	ng/kg	340	n	340	Ω	350	D	330	Ω	340	Ω	350	D
Carbazole	ug/kg		ח	340	Ω	350	Ω	330	Ω	340	Ω	350	n
Chrysene	ug/kg		Ω	340	Ω	350	Ω	330	D	340	n	350	D
Di-n-butyl phthalate	ng/kg		n	340	Ω	350	n	330	D	340	n	350	D
Di-n-octyl phthalate	ug/kg		n	340	Ω	350	Þ	330	n	340	ם	320	n
Dibenzo(a,h)anthracene	ug/kg		ם	340	Ω	350	Ω	330	D	340	D	350	Ω
Dibenzofuran	ng/kg		D	340	n	350	Ω	330	Þ	340	Þ	350	ņ
Diethyl phthalate	ug/kg		n	340	Ω	350	D	330	n	340	Þ	350	D
Dimethyl phthalate	ug/kg		D	340	Ω	350	O	330	D	340	Ω	350	n
Fluoranthene	ug/kg		D	340	Ω	350	n	330	Ω	340	ם	350	D
Fluorene	ug/kg		ם	340	D	350	Ω	330	D	340	D	350	Ω
Hexachlorobenzene	ng/kg		ם	340	n	350	D	330	Ω	340	D	350	Ω
Hexachlorobutadiene	ug/kg	340	D	340	Ω	350	Ω	330	n	340	D	350	D
Hexachlorocyclopentadiene	ug/kg	340	D	340	Ω	350	Ω	330	n	340	ח	350	n
Hexachloroethane	ug/kg		D	340	Ω	350	n	330	n	340	Ω	350	n
Indeno(1,2,3-c,d)pyrene	ug/kg		Ω	340	D	350	D	330	D	340	D	350	ח
Isophorone	ug/kg	340	n	340	D	350	Ω	330	D	340	n	350	ם
N-Nitrosodi-N-Propylamine	ng/kg		Ω	340	D	350	ם	330	D	340	Ω	350	Ω
N-Nitrosodiphenylamine	ug/kg		Ω	340	Ω	350	Ω	330	Ω	340	Ω	350	n
Naphthalene	ug/kg	340	Ω	340	D	350	Ω	330	n	340	Ω	350	Ω

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

COLL	LOCATOR: SAMPLE ID: COLLECTION DATE:	SB4 PC-MP2-SB4-S 08/14/93	SS03-04	SB4 PC-MP2-SB4-SS04-05 08/17/93	SS04-05	SB5 PC-MP2-SB5-SS00-02 08/17/93	ss00-02 3	SB5 PC-MP2-SB5-SS04-05 08/17/93	\$504-05 3	SB6 PC-MP2-SB6-SS05-06 08/15/93	\$\$05-06 3	SB7 PC-MP2-SB7-SS05-06 08/15/93	SS05-06 33
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
	# 1000 mm	340	=	340	=	350	Ω	330	ם	340	Þ	350	n
Nitrobenzene	ag/kg	340	<b>:</b>	9	=	840	þ	810	ם	830	D	840	ם
Pentachlorophenol	ug/kg "	830	<b>&gt;</b> =	340	=	350	ם מ	330	ם	340	n	350	n
Phenanthrene	ug/kg	250	<b>;</b>	2 6	2	350	=	330	=	340	ם	350	כ
Phenol	ug/kg	340	<b>&gt;</b>	340	<b>:</b>	350	<b>=</b>	330	=	340	Þ	350	Þ
Pyrene	ug/kg	340	>	340	<b>&gt;</b> :	000	> =	330	=	340	=	350	ב
bis(2-Chloroethoxy)methane	ug/kg	340	Þ	340	) :	350	<b>&gt;</b> :	330	<b>&gt;</b> =	340	=	350	D
bis(2-Chloroethyl) ether	ug/kg	340	ם	340	<b>&gt;</b>	350	<b>&gt;</b> :	330	<b>&gt;</b>	240	=	350	· =
bis(2-Ethylhexyl)phthalate	ug/kg	340	ם	340	Þ	350	>	330	5	OF.	>	2	)
METALS								•		•		٠	
Aluminum	mg/kg			•				07 7	111	07.4	111	4.90	
Antimony	mg/kg			4.60		4.70		00.4		1.50		12.0	) E
	mg/kg	0.79	9 (B	0.41	ı uL	9.0	() B	0.41	90	0.0			
	mg/kg	•		1		•		•		• •		0 43	11
<b>-</b>		0.42		0.41		0.42		0.41		0.42		2.0	_
		0.52	2 UL	0.52	2 O	0.53	<b>&gt;</b>	0.51	<b>-</b>	75.0	٦ ٥		
		•		•		•				•		•	
		2.50	0	3.10		5.10		2.50		2.10		4.10	
Chromium Havavalent			D C	0.01	1 U	0.01		0.01		0.01	0	0.01	) 
Cincinnii, 11caavaren.				•		•		•		•		•	
	84/8mm 84/8mm	091	Ω 09	2	C	2.10	0	1.70	0	1.60	<b>n</b> 0	2.40	0
	94/9			, ,	,	•				•			
	mg/kg ms/ka		ţ.	1.20	) W	2.50	<b>1</b> 0	1.20	<b>.</b> (	0.94	4 B	1.10	10 B
			l	,		•		•		•			
				•		•		•		•		•	
		91		01.0	1	0.11	n 1	0.10	<b>D</b>	0.10		0.11	11 U
Mercury			2 2	· •		6.90		4	5	3.60	n 0	e,	3.80 U
				, 1	ľ	•		•		•		•	
Potassium	IIIB/NB		11	0.31	. 111	0.32	2 UL	0.30	<b>n</b> 0	0.31	1 O	Ö	
Selenium	Sylven Sylven		-	0.41		0.42		0.41	1 U	0.42	2 UL	Ö	0.43 UL
Silver	mg/kg					•	1	•		•		•	
Sodium	mg/kg 		111	0 31	111	0.32	2 UL	0.30	O UL	0.31	I UL	Ó	0.32 UL
Thallium	ga/kg		_	3				•		•		•	
Vanadium	mg/kg			• (	٤	6 6	9	3 50	<b>x</b>	6.70	0.0	6	9.60 B
Zinc	mg/kg	13.50	20 B	•	20	C. 6		3		•			
		5, 5000											
TPH			9	0 40	Ş	23.20	9	193		43.50	9	56	26.40
Total Petroleum Hydrocarbons	ons mg/kg	13.30	20	•	2	;	2						
		section.											

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COLLE	LOCATOR: SAMPLE ID: COLLECTION DATE:	SB8 PC-MP2-SB8-SS 08/15/93	.SS05-06	SB9 PC-MP2-SB9-SS03-04 08/16/93	-SS03-04	SB9 PC-MP2-SB9-SS04-06 08/16/93	SS04-06	SB10 SB10 SB10 SB10 SB10 SB11 PC-MP2-SB10-SS03-04 PC-MP2-SB10-SS08-10 PC-CG3-SB11-SS04-06 09/13/93 08/26/93	SS03-04	SB10 PC-MP2-SB10-S 09/13/93	SS08-10	SB11 PC-CG3-SB11-S 08/26/93	-SS04-06
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010 1.1.1.2-Tetrachloroethane	Herke	96.0	12	0.94	D	0.93	1	0.92	1	0.93	=	0.93	=
1,1,1-Trichloroethane	ug/kg	0.19		0.05	. w	2.80		2.80	Þ	2.80	) <b>)</b>	0.11	, <b>m</b>
1,1,2,2-Tetrachloroethane	ug/kg	0.63	D S	0.63	_	0.62		0.61		0.62		0.62	
1,1,2-Trichloroethane	ug/kg	0.89	n e	0.89	D 6	0.88		0.87	D	0.88	ם	0.88	
1,1-Dichloroethane	ug/kg	0.79	D 6	0.78	D 8	0.77	0 /	0.77	D	0.77	מ	0.77	n /
1,1-Dichloroethylene	ug/kg	0.89	D 6	0.89	O 6	0.88	3 C	0.87	n	0.88	D	0.88	O .
1,2,3-Trichloropropane	ug/kg	0.95	2 O	0.94	4 U	0.93	D C	0.92	n	0.93	Þ	0.93	ם ۱
1,2-Dibromoethane	ug/kg	1.40	n 0	1.40	<b>n</b> 0	1.30	<b>D</b> C	1.30		1.30	D	1.30	n (
1,2-Dichlorobenzene	ug/kg	1.50	n 0	1.50	<b>n</b> 0	1.40	O 0	1.40	5	1.40		1.40	
1,2-Dichloroethane	ug/kg	89.0	n 8	89.0	n 8	0.67	0 /	99.0	D	19.0	D	0.67	
1,2-Dichloropropane	ug/kg	99.0	n 8	89.0	n 8	0.67	0 /	99.0	ח	19.0	n	0.67	0 /
1,2-trans-Dichloroethylene	ug/kg	1.20	n 0	1.10	D 0	1.10	n 0	1.10	Þ	1.10	Þ	1.10	D C
1,3-Dichlorobenzene	ug/kg	1.20	<b>n</b> 0	1.10	<b>n</b> 0	1.10	n o	1.10	ħ	1.10	Ω	1.10	n (
1,3-cis-Dichloropropylene	ug/kg	-		0.99	D 6	0.98	n 8	0.97	D	0.98		0.98	D 8
1,3-trans-Dichloropropylene	ug/kg	0.89	D . 6	0.89	n 6	0.88	n 8	0.87	Þ	0.88	Ω	0.88	D .
1.4-Dichlorobenzene	ug/kg	1.50	n 0	1.50	<b>n</b> 0	1.40	n o	1.40	5	1.40	D	1.40	Ω .
2-Chloroethylvinyl ether	ug/kg	1.20	n 0	1.10	<b>n</b> 0	1.10	n 0	1.10		1.10	_	1.10	<b>D</b> 0
2-Chlorotoluene	ug/kg	1.10	n 0	_	n	-	Ω	-		-	D		ם
4-Chlorotofuene	ug/kg	1.20	n 0	1.10	O O	1.10	n 0	1.10	'n	1.10	Ω	1.10	n 0
Bromobenzene	ug/kg		O 6	0.78	9 n	0.77	0 L	7.0	ī	0.77	D	0.77	0 L
Bromochloromethane	ug/kg	0.95	5 U	0.94	4 U	0.93	3 O	0.92	D	0.93	D	0.93	3 O
Bromodichloromethane	ug/kg	1.10	n 0	-	D	-	D	-	Þ		ם	-	D
Bromoform	ug/kg	0.95	5 U	0.94	4 U	0.93	3 O	0.92	Þ	0.93	D	0.93	3 O
Carbon Tetrachloride	ug/kg		n 8	89.0	n 8	0.67	7 U	99.0	D	0.67	D	0.67	7 U
Chlorobenzene	ug/kg		5 U	0.94	4 C	0.93	3 O	0.92	Þ	0.93	D	0.93	3 O
Chloroethane	ug/kg		n 0	2.70	n 0.	2.70		2.70		2.70	_	2.70	_
Chloroform	ug/kg		9 B	0.57	7 B	0.63	3 B	0.30	æ	0.31		0.59	
Dibromochloromethane	ug/kg		D	0.83	3 n	0.82	2 U	0.82	Þ	0.82	D	0.82	2 U
Dibromomethane	ug/kg		.5 U	0.94	D 4	0.93	3 U	0.92	D	0.93		0.93	3 U
Methyl bromide	ug/kg		D 0	2.90	n 0	2.90	n o	2.90	D (	2.90		2.90	
Methyl chloride	ug/kg	2.60		2.60	<b>D</b> 03	2.60	n 0	2.60	Þ	2.60		2.60	-
Methylene chloride	ug/kg	1.40	93	5.70	<b>B</b>	7	Ø	5.20	<b>B</b>	4.10	8	2.70	90
Tetrachloroethylene	ng/kg	0.84	<b>4</b>	0.83	3 U	0.82	. O	0.82	D i	0.82	ם ì	0.82	2 O
Trichloroethylene	ug/kg		7 D	0.83		0.82	. O	0.82		0.82	<b>D</b>	0.82	2 U
Vinyl chloride	ug/kg	2.70	Ω 0.	2.70	n 0,	2.70	n 0.	2.70	Ω (	2.70	D (	2.70	n 0.

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

Control   Cont	uy/kg         5.50         U         1.50         U         1.20         U         1.40         U         1.40         U         1.40         U         1.40         U         1.40         U         1.50         U	SAMPLE ID: COLLECTION DATE:		SB8 PC-MP2-SB8-SS05-06 08/15/93	-SS05-06 )3	SB9 PC-MP2-SB9-SS03-04 08/16/93	-SS03-04 93	SB9 PC-MP2-SB9-SS04-06 08/16/93	-SS04-06 193	SB10 PC-MP2-SB10-S 09/13/93	-SS03-04	SB10 SB10 SB10 SB10 SB11 PC-MP2-SB10-SS03-04 PC-MP2-SB10-SS04-06 09/13/93 08/26/93	)-SS08-10 93	SB11 PC-CG3-SB11-S 08/26/93	-SS04-06 33
restrates         wig/kg         0.03         1.50         UJ         2.50         U         1.40         U         0.12         E         0.12         E         0.12         U         0.12         U         1.50	The continue		UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Participation   Participatio	Teachers         ug/kg         0.03         1.50         UT         1.20         U         1.50         U<					•		•	S	ć	=	-	=	ć	с п
Testing ug/kg 150 U 150	The control of the co	enzene	ug/kg	0.0	<b>.</b>			2.5		1.0		0.1		0.1	
up/kg         1.50 <t< td=""><td>  The control   The control  </td><td>enzene</td><td>ug/kg</td><td>7.0</td><td></td><td></td><td></td><td></td><td></td><td>. <del>.</del></td><td></td><td>61</td><td></td><td>1.9</td><td>_</td></t<>	The control	enzene	ug/kg	7.0						. <del>.</del>		61		1.9	_
ug/kg         3.40         U         3.30         U         1.90         U	Value   Valu	enzene	ug/kg	¥		V. 1		•				•			1
ug/kg         1.90         U         1.80         U         1.90         U         1.40         U	The control of the	enzene	8//gn 5//***	3 AC		4		6.6		3.3		3.3		3.3	<b>n</b> 0
ug/kg         1.50         UT         1.40         U         1.40         U         1.40         U         1.40         U         1.40         U         1.50         U         1.50         UT         1.50         U	There ug/kg 1.50 U 1.50 UJ 1.60 U 1.40 U 1.40 U 1.40 U 1.40 U 1.50 U 1.5	nyinenzene Sozene	ay/gn	0.4		6.		1.5		1.8		0.1		1.9	D 0
up/kg         1.50         U         1.50         U         1.40         U	ug/kg         1.50         U         1.50         U         1.40         U         1.50         U	90200	64/6n	;		•		•		ı		•		•	
ug/kg         1:90         U	ug/kg         150         U	olikoliko Tarangan	ug/ng no/ko	1.50	-	1.5		1.4		1.4		4.1		1.4	<b>n</b> 0
Effect ug/kg 12 U 190 U 190 U 180 U 180 U 190 U	Effect wig/kg 1:90 U 1:90 U 1:90 U 1:80 U 1:90 U 1:		110/kg	1.90		6.1		5:1	-	1.8		1.9		1.5	
ug/kg         12         U         11	ug/kg         12         U         11         U         12         U         12         U         12		110/kg	1 6		1.9		2.1		1.8		1.9		1.9	
ug/kg         1.60         U         1.60         U         1.60         U         1.50         U	ug/kg         1.60         U         1.50         U	l Ether	110/kg	12.		=	,	=		11		=======================================		11	
ug/kg         350         U         340         U	ug/kg         350         U         340         U		110/kg	1.6.		1.6	0	1.5		1.5		1.5		1.5	
ug/kg         350         U         340         U	ug/kg         350         U         340         U		ug/kg	0.13		5.5		5.5		0.1		0.1		0.7	
ug/kg         350         U         340         U	ug/kg         350         U         340         U														
ug/kg         350         U         340         U	ug/kg         350         U         340         U									;	;		;	6	:
ug/kg         350         U         340         U	ug/kg         350         U         340         U	obenzene	ug/kg	350	Ω	340	D	340	Ω	340	<b>D</b> :	340	<b>)</b> ;	340	<b>:</b>
ug/kg         350         U         340         U	ug/kg         350         U         340         U	enzene	ug/kg	350	Ω	340	D	340	D	340	ם	340	<b>&gt;</b>	340	<b>)</b> ;
ug/kg         350         U         340         U	ug/kg         350         U         340         U	enzene	ug/kg	350	n	340	D	340	n	340	D	340	<b>)</b>	340	<b>&gt;</b> ;
ug/kg         350         U         340         U	ug/kg         350         U         340         U	enzene	ug/kg	350	Þ	340	Ω	340	n	340	D.	340	<b>D</b> ;	340	<b>&gt;</b> ;
ug/kg         840         U         820         U         820         U         820         U         810           ug/kg         350         U         340	ug/kg         840         U         820         U         820         U         810           ug/kg         350         U         340	-Chloropropane)	ug/kg	350	Ω	340	Ω	340	D	340	P	340	<b>D</b> :	340	<b>&gt;</b> ;
ug/kg         350         U         340         U	ug/kg         350         U         340         U	ophenol	ug/kg	840	n	820	Ω	830	Ω	820	D	820	Þ	810	<b>&gt;</b> 1
ug/kg         350         U         340         U	ug/kg         350         U         340         U	ophenol	ug/kg	350	Ω	340	n	340	Ω	340	Þ	340	D	340	Þ
ug/kg         350         U         340         U	ug/kg         350         U         340         U	henol	ug/kg	350	n	340	Ω	340	Ω	340	ם	340	D	340	P
ug/kg         840         U         820         U         820         U         810           ug/kg         350         U         340	ug/kg         840         U         820         U         820         U         810           ug/kg         350         U         340	henol	ug/kg	350	Ω	340	ם	340	D	340	Þ	340	n	340	<b>&gt;</b>
ug/kg         350         U         340         U	ug/kg         350         U         340         U	enol	ug/kg	840	Ω	820	n	830	ם	820	D	820	Þ	810	<b>&gt;</b>
ug/kg         350         U         340         U	ug/kg         350         U         340         U	uene	ug/kg	350	ם	340	D	340	D	340	Þ	340	D	340	<b>)</b>
ug/kg         350         U         340         U	ug/kg         350         U         340         U	uene	ug/kg	350	D	340	ב	340	n	340	D	340	D	340	<b>-</b>
ug/kg         350         U         340         U         340         U         340         U         340           ug/kg         840         U         820         U         830         U         820         U         810           ug/kg         350         U         340         U         340         U         340         U         340           ug/kg         350         U         820         U         830         U         820         U         340           ug/kg         350         U         340         U         340         U         340         U         340           ug/kg         350         U         340         U         340         U         340         U         340	ug/kg         350         U         340         U         340         U         340         U         340           ug/kg         840         U         820         U         830         U         820         U         810           ug/kg         350         U         340         U         340         U         340         U         340           ug/kg         350         U         820         U         830         U         820         U         340           ug/kg         350         U         340         U         340         U         340         U         340           ug/kg         350         U         340         U         340         U         340         U         340	thalene	ug/kg	350	Ω	340	Ω	340	Ω	340	n	340	D	340	<b>•</b>
enol         ug/kg         840         U         820         U         820         U         810           ug/kg         350         U         340         U         810         U         340         U         810         U         840         U         340         U         340         U         340         U         340         U         340         U         340         U	enol ug/kg 840 U 820 U 830 U 820 U 810  ug/kg 350 U 340 U 340 U 340 U 340 U 340 U 340  ug/kg 350 U 820 U 830 U 820 U 820 U 810  ug/kg 350 U 340 U 340 U 340 U 340 U 340  ug/kg 350 U 340 U 340 U 340 U 340 U 340  ug/kg 350 U 340 U 340 U 340 U 340 U 340  ug/kg 350 U 340 U 340 U 340 U 340 U 340  ug/kg 350 U 340 U 340 U 340 U 340  U 340 U 340		ue/kg	350	ם	340	D	340	D	340	D	340	D	340	<b>-</b>
ug/kg         350         U         340         U         340         U         340         U         340           ug/kg         350         U         340         U         340         U         340         U         340           ug/kg         350         U         340         U         340         U         340         U         340           ug/kg         350         U         340         U         340         U         340         U         340	ug/kg         350         U         340         U         340         U         340         U         340           ug/kg         350         U         340         U         340         U         340         U         340           ug/kg         350         U         340         U         340         U         340         U         340           ug/kg         350         U         340         U         340         U         340         U         340	-Dinitrophenol	ng/kg	840	Ω	820	n	830	Ω	820	ם	820	D	810	_
ug/kg         350         U         340         U         340         U         340         U         340           ug/kg         840         U         820         U         830         U         820         U         810           ug/kg         350         U         340         U         340         U         340         U         340           ug/kg         350         U         340         U         340         U         340         U         340	ug/kg         350         U         340         U         340         U         340         U         340           ug/kg         840         U         820         U         830         U         820         U         810           ug/kg         350         U         340         U         340         U         340         U         340           ug/kg         350         U         340         U         340         U         340         U         340	hthalene	ug/kg	350	n	340	n	340	D	340	n	340	Þ	340	_
ug/kg         840         U         820         U         820         U         810           ug/kg         350         U         340         U         340         U         340         U         340           ug/kg         350         U         340         U         340         U         340         U         340	ug/kg 840 U 820 U 830 U 820 U 810 ug/kg 350 U 340 U 340 U 340 U 340 U 340 ug/kg 350 U 340 U 340 U 340 U 340	- Pol	ug/kg	350	ם	340	Ω	340	n	340	Þ	340	Þ	340	
ug/kg 350 U 340	ug/kg 350 U 340		ay/an	840	Ω	820	Ω	830	D	820	n	820	Ω	810	ے
ug/kg 350 U 340 U 340 U 340 U 340	ug/kg 350 U 340 U 340 U 340 U 340 U 340		ug/kg	350	D	340	n	340	Ω	340	n	340	Þ	340	_
ò	) 5	henzidine	ug/kg	350	Ω	340	Ω	340	D	340	D	340	Ω	340	_
			)												

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

S	LOCATOR: SAMPLE ID: COLLECTION DATE:	SB8 PC-MP2-SB8-SS05-06 08/15/93	-SS05-06 93	SB9 PC-MP2-SB9-SS03-04 08/16/93	SS03-04	SB9 PC-MP2-SB9-SS04-06 08/16/93	-SS04-06 93	SB10 SB10 SB10 SB10 SB11 PC-MP2-SB10-SS03-04 PC-MP2-SB10-SS08-10 PC-CG3-SB11-SS04-06 09/13/93 08/26/93	-SS03-04	SB10 PC-MP2-SB10-S 09/13/93	-SS08-10 33	SB11 PC-CG3-SB11-S 08/26/93	-SS04-06
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
3-Nitroaniline	ug/kg	840	D	820	Ω	830	D	820	n	820	Þ	810	D
4-Bromophenyl phenyl ether	ug/kg	350	Ω	340	D	340	Ω	340	D	340	Þ	340	D
4-Chloro-3-methyl phenol	ug/kg	350	D	340	n	340	D	340	D	340	Þ	340	Þ
4-Chloroaniline	ug/kg	350	D	340	Ω	340	Ω	340	D	340	n	340	Þ
4-Chlorophenyl phenyl ether	ug/kg	350	Ω	340	n	340	D	340	Ω	340	ם	340	ם
4-Methylphenol	ug/kg	350	Ω	340	Ω	340	Ω	340	Ω	340	D	340	D
4-Nitroaniline	ug/kg	840	Þ	820	Ω	830	D	820	n	820	D	810	Ω
4-Nitrophenol	ug/kg	840	O	820	n	830	Ω	820	D	820	D	810	Ω
Acenaphthene	ug/kg	350	Ω	340	n	340	Ω	340	D	340	Ω	340	n
Acenaphthylene	ug/kg	350	D	340	n	340	Ω	340	Ω	340	D	340	D
Anthracene	ug/kg	350	Ω	340	Ω	340	Ω	340	n	340	D	340	ם
Benzo(a)anthracene	ug/kg	350	Ω	340	n	340	Ω	340	ח	340	D	340	ם
Benzo(a)pyrene	ug/kg	350	Ω	340	n	340	Ω	340	ב	340	D	340	ם
Benzo(b)fluoranthene	ug/kg	350	n	340	Ω	340	Ω	340	Ω	340	D	340	n
Benzo(ghi)perylene	ug/kg	350	n	340	Þ	340	D	340	n	340	D	340	ם
Benzo(k)fluoranthene	ug/kg	350	n	340	D	340	ם	340	n	340	D	340	ם
Butyl benzyl phthalate	ug/kg	350	n	340	D	340	n	340	D	340	D	340	n
Carbazole	ug/kg	350	D	340	Ω	340	D	340	D	340	n	340	Þ
Chrysene	ug/kg	350	ם	340	n	340	n	340	D	340	n	340	ם
Di-n-butyl phthalate	ug/kg	350	ם	340	Ω	340	n	340	D	340	D	340	D
Di-n-octyl phthalate	ug/kg	350	Ω	340	n	340	D	340	Þ	340	Ω	340	D
Dibenzo(a,h)anthracene	ug/kg	350	ם	340	D	340	Þ	340	D	340	D	340	Þ
Dibenzofuran	ug/kg	350	ם	340	Ω	340	Þ	340	n	340	ם	340	ם
Diethyl phthalate	ug/kg	350	Þ	340	Ω	340	n	340	Ω	340	Ω	340	Ω
Dimethyl phthalate	ug/kg	350	<b>¬</b>	340	ם	340	D	340	n	340	D	340	D
Fluoranthene	ug/kg		n	340	n	340	Ω	340	Ω	340	n	340	ם
Fluorene	ug/kg		<b>&gt;</b>	340	Ω	340	Ω	340	n	340	D	340	n
Hexachlorobenzene	ug/kg		D	340	n	340	Ω	340	Ω	340	Þ	340	ם
Hexachlorobutadiene	ug/kg		D	340	n	340	Ω	340	D	340	Ω	340	ם
Hexachlorocyclopentadiene	ug/kg		Ω	340	n	340	Ω	340	ם	340	Þ	340	D
Hexachloroethane	ug/kg		Ω	340	D	340	D	340	Þ	340	D	340	Þ
Indeno(1,2,3-c,d)pyrene	ug/kg		Þ	340	Þ	340	Ω	340	ם	340	Þ	340	י י
Isophorone	ug/kg		Ω	340	D	340	D	340	ם	340	n	340	D
N-Nitrosodi-N-Propylamine	ug/kg		D	340	D	340	D	340	D	340	D	340	ם
N-Nitrosodiphenylamine	ug/kg	350	D	340	D	340	n	340	D	340	n	340	D
Naphthalene	ug/kg	350	n	340	n	340	Ω	340	D	340	n	340	D

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

COLLEC	LOCATOR: SAMPLE ID: COLLECTION DATE:	SB8 PC-MP2-SB8-SS05-06 08/15/93	902-06	SB9 PC-MP2-SB9-SS03-04 08/16/93	S03-04	SB9 PC-MP2-SB9-SS04-06 08/16/93		SB10 SB10 SB10 SB10 PC-MP2-SB10-SS08-10 PC-CG3-SB11-SS04-06 09/13/93 08/26/93	\$803-04	SB10 PC-MP2-SB10-S 09/13/93	SS08-10 3	SB11 PC-CG3-SB11-S 08/26/93	-SS04-06 13
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
		,	;	,	=	240	=	340	n	340	Ω	340	Ω
Nitrobenzene	ug/kg	320	<b>)</b>	340	<b>:</b>	9	) =	820	=	820	Þ	810	Þ
Pentachlorophenol	ug/kg	840	<b>&gt;</b>	078	<b>&gt;</b>	930	) <b>:</b>	240	=	340	=	340	ם
Phenanthrene	ug/kg	350	כ	340	ם	340	<b>&gt;</b>	046	<b>:</b>	2 5	:	340	=
	no/ko	350	כ	340	D	340	Þ	340	>	340	<b>)</b>	2.0	;
Frenoi	56/18 11/21	350	1	340	ם	340	D	340	ם	340	<b>-</b>	340	<b>)</b>
Pyrene	9 / P		=	340	=	340	D	340	ם	340	>	340	<b>)</b>
bis(2-Chloroethoxy)methane	ug/kg		> =	340	=	340	ם	340	ם	340	ם	340	<b>&gt;</b>
bis(2-Chloroethyl) ether	ng/kg		<b>)</b>	, c	=	340	=	340	n	340	D	340	כ
bis(2-Ethylhexyl)phthalate	ug/kg	320	>	340	•	2	)	! !					
MEIAL	,			•				•		•		•	
Aluminum	mg/kg "		=	4 70	Ε	4.80	n or	4.60	ď	4.70	O CIL	4.60	0 CI
Antimony	mg/kg		ָ מַ	64.0		75.0		0.75		0.41		0.48	
Arsenic	mg/kg		9	10:0				•		•		•	
Barium	mg/kg		:	•	Ξ	0.40	=	0.41	ם	0.41	D [	0.41	
Beryllium	mg/kg		<b>)</b>	0.42		21.0	-	150	_	0.52	2 UL	0.52	Z OL
Cadmium	mg/kg	0.52	JD	0.52	70	 		10.0		•			
Calcium	mg/kg			•		' 6		7 50		2.80	0	3.20	93
Chromium	mg/kg			2.70		3.10		10.0		000	=	0.01	U U
Chromium, Hexavalent	l/gm	0.01	D	0.01	2	0.01	-	0.0		;		•	
Cobalt	mg/kg	•		•		,			•	6	c	2.70	02
Copper	mg/kg	1.60	ם	2.10	0	D9.I	0	1.80		<b>:</b>		•	
Tron	mg/kg			•		٠,	•	•	-	00 0	2	0.84	4
Lead	mg/kg	2.50	B	0.84	<u> </u>	-	20	1.1		•		•	
Magnesium	mg/kg			•		•		•				•	
Manganese	mg/kg	ı		•		•		' '		01.0		•	0.10
Mercury	mg/kg		ח	0.10		0.11		0.10		3.60	2 5		
Nickel	mg/kg	3.70		3.60	Ω (	3.70	0	3.60	<b>-</b>	ייר י		; ·	
Potassium	mg/kg			•					=	0.31	=======================================	Ċ	0.31 U
Selenium	mg/kg			0.33		0.32				170		C	0.41 U
Silver	mg/kg	0.42	Th.	0.42	7n 7	0.42	Z OL	4.0	_	•	_	; ·	
Hiller	mg/kg			•							111		0.31 11
Thallium	mg/kg	9 0.31	TI	0.31	15 1	0.32	12 OL	0.31	) 	 D			_
Vanadiim	mg/kg			•		•				' \$	5	71	14 80 B
Zino	mg/kg	01	Д	5.40	9 O	4.60	90	15.30	0	12.70	₹		
		persons											
ТРН				9		40 40	ç	40.60	c	19		7	7.20
Total Petroleum Hydrocarbons	ons mg/kg	<b></b>		18.20	<b>5</b>	F	2		,				
		92340 87											
CONTRACTOR OF THE STATE OF THE	Control of the Contro												

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

Discription of the process of the	08-10	QUAL	1	<u></u>	m	ם	ם	Ω	n	D	D	n	Ω	D	D	ח	D	ח	Þ	Ω	Þ	D	ם	n	n	D	n	D	ם	М	Þ	ם	Ω	Þ	8	D	ח	D	
COLLECTION DATE   DECATOR: SBI1   SBI2   PECGJ-SBI1-SSI0-12   PECGJ-SBI1-SSI0-14   PEGGJ-SBI1-SSI0-14   PEGGJ-SBI1-SBI1-SSI0-14   PEGGJ-SBI1-SBI1-SSI0-14   PEGGJ-SBI1-SBI1-SSI0-14   PEGGJ-SBI1-SBI1-SSI0-14   PEGGJ-SBI1-SBI1-SBI1-SBI1-SBI1-SBI1-SBI1-SBI1	SB13 CG3-SB13-SS 08/26/93		,	0.93	0.18	0.62	0.88	0.77	0.88	0.93	1.30	1.40	0.67	0.67	1.10	1.10	0.98	0.88	1.40	1.10	-	1.10	0.77	0.93	***	0.93	0.67	0.93	2.70	0.67	0.82	0.93	2.90	2.60	10	0.82	0.82	2.70	
LOCATOR:         SB11         SB12         SB12         SB12         SB12         SSB14         SB12         SSB14         Continent         Continen	04-06 PC-		1	Þ	Ø	ſ	Þ	D	Ω	-	ם	ם	D	ם	Ω	Ω	Þ	n	D	Ω	Ω	D	D	n	D	D	Ω	D	Þ	æ	D	n	n	ם	<b>B</b>	D	•	D	
LOCATOR:         SB11         SB12         SB12         SB12         SB12         SSB14         SB12         SSB14         Continent         Continen	SB13 -CG3-SB13-SS 08/26/93		,	0.93	0.14	0.33	0.88	0.77	0.88	0.50	1.30	1.40	0.67	0.67	1.10	1.10	0.98	0.88	1.40	1.10		1.10	0.77	0.93		0.93	0.67	0.93	2.70	0.54	0.82	0.93	2.90	2.60	2.80	0.82	0.20	2.70	
LOCATOR:         SB11         SB12         SB12         SB12         SB12         SSB14         SB12         SSB14         Continent         Continen	S02-04 PC		1	ָם י	ם	n	Ω	n	n	Ω	ם	n	ם	n	D	ם	n	כ	ם	D	ם	D	Þ	D	ם	n	D	Ω	D	В	D	Ω	n	D	М				
LOCATOR:         SB11         SB12         SB12         SB12         SB12         SSB14         SB12         SSB14         Continent         Continen	SB13 -CG3-SB13-S 08/26/93		1	0.95	2.80	0.63	0.89	0.79	0.89	0.95	1.40	1.50	89.0	89.0	1.20	1.20	-	0.89	1.50	1.20	1.10	1.20	0.79	0.95	1.10	0.95	89.0	0.95	2.70	0.40	0.84	0.95	2.90	2.60	3.10	0.84	0.84	2.70	
LOCATOR:         SBI1         SB12           SAMPLE ID:         PC-CG3-SB11-SS10-12         PC-CG3-SB12-SS04-06           COLLECTION DATE:         08/26/93         DR-CG3-SB12-SS04-06           circultorechane         ug/kg         0.94         UJ         0.03         U           circultorechane         ug/kg         0.84         UJ         0.03         U           circultorechane         ug/kg         0.89         UJ         0.03         U           corechane         ug/kg         0.89         UJ         0.04         U         0.04         U           corechane         ug/kg         0.10         UJ         0.11         U         U         0.04         U         0.04         U         0.04         U			i	י פ			ם	D	ם								n				-							-			D I								
LOCATOR:         SBI1         SB12           SAMPLE ID:         PC-CG3-SB11-SS10-12         PC-CG3-SB12-SS04-06           COLLECTION DATE:         08/26/93         DR-CG3-SB12-SS04-06           circultorechane         ug/kg         0.94         UJ         0.03         U           circultorechane         ug/kg         0.84         UJ         0.03         U           circultorechane         ug/kg         0.89         UJ         0.03         U           corechane         ug/kg         0.89         UJ         0.04         U         0.04         U           corechane         ug/kg         0.10         UJ         0.11         U         U         0.04         U         0.04         U         0.04         U	SB12 C-CG3-SB12- 08/26/9	RESULT		0.95	0.19	0.63	0.89	0.79	0.89	0.95	1.40	1.50	89.0	89.0	1.20	1.20	_	0.89	1.50	1.20	1.10	1.20	0.79	0.95	1.10	0.9	39.0	0.0	2.70	0.53	78.0	6.0	2.9(	7.6	3.10	0.8	0.8	2.7	
COLLECTION DATE: 08/26/93		QUAL	;	<b>&gt;</b>	æ	D	D	Ω	n	Ω	Ω	ם	D	n	Ω	ח	Ω	n	D	n	D	D	Ω	D	ח	Þ	Ω	Ω		Ω	D			n					
COLLECTION DATE: 08/26/93	SB12 C-CG3-SB12-9 08/26/93		,	0.93	0.00	0.62	0.88	0.77	0.88	0.93	1.30	1.40	0.67	0.67	1.10	1.10	86.0	0.88	1.40	1.10	1	1.10	0.77	0.93	-	0.93	0.67	0.93	2.70	0.60	0.82	0.93	2.90	2.60	2.90	0.82	0.82	2.70	
ctrachloroethane chachoroethane chachoroethane chachoroethane chachoroethane oroethane oroethylene orobenzene orobenzene orobenzene orobenzene orobenzene orobenzene orobenzene chloropropylene orobenzene chloropropylene orobenzene chloropropylene orobenzene chloropropylene chloropropylene chloropropylene chloropropylene chloropropylene chloromethane maen me	10-12	JUAL	;	5	5	n	n	n	5	m	n	5	Ð	5	5	'n	n	5	5	5	5	n	n	n	5	5	n	5	5	æ	5	5	5	5	m	5	5	Б	
ctrachloroethane chachoroethane chachoroethane chachoroethane chachoroethane oroethane oroethylene orobenzene orobenzene orobenzene orobenzene orobenzene orobenzene orobenzene chloropropylene orobenzene chloropropylene orobenzene chloropropylene orobenzene chloropropylene chloropropylene chloropropylene chloropropylene chloropropylene chloromethane maen me	SB11 2-CG3-SB11-S 08/26/93		•	0.94	2.80	0.63	0.89	0.78	0.89	0.94	1.40	1.50	99.0	89.0	1.10	1.10	0.99	0.89	1.50	1.10		1.10	0.78	0.94	-	0.94	89.0	0.94	2.70	0.42	0.83	0.94	2.90	2.60	2.40	0.83	0.83	2.70	
ctrachloroethane chachoroethane chachoroethane chachoroethane chachoroethane oroethane oroethylene orobenzene orobenzene orobenzene orobenzene orobenzene orobenzene orobenzene chloropropylene orobenzene chloropropylene orobenzene chloropropylene orobenzene chloropropylene chloropropylene chloropropylene chloropropylene chloropropylene chloromethane maen me	OCATOR: MPLE ID: PC ON DATE:	UNITS:		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ag/kg	ug/kg	ug/kg	
8010 1,1,1,2-Tetrachlo 1,1,1,2-Tetrachlo 1,1,2-Trichloroetl 1,1,2-Trichloroetl 1,1,2-Trichloroetl 1,1-Dichloroetha 1,1-Dichloroetha 1,2-Dichloroetha 1,2-Dichloroetha 1,2-Dichloroetha 1,2-Dichloroetha 1,2-Dichloroetha 1,2-Dichlorobenz 1,3-trans-Dichlor 1,3-trans-Dichlorobenz 1,3-trans-Dichlorobenz 1,3-trans-Dichlorobenz 1,3-trans-Dichlorobenz 1,3-trans-Dichlorometh 1,3-trans-Dichlorometh 1,3-trans-Dichlorometh 1,3-trans-Dichlorometh 1,3-trans-Dichlorometh 1,3-trans-Dichlorometh 1,3-trans-Dichlorometh 1,3-trans-Dichloromethylem 1,3-transloroethylem 1,4-trachloroethylem 1,4-trachloroe	I SA COLLECTK			roethane	hane	roethane	hane	<b>.</b>	lene	opane	ne.	ene	2	ane	oethylene	ene	ropylene	opropylene	ene	yl ether				lane	ethane		nide				ethane				<b>ep</b>	ene	<b>e</b> )		
			8010	1,1,1,2-Tetrachlo	1,1,1-Trichloroet	1,1,2,2-Tetrachlo	1,1,2-Trichloroet	1, 1-Dichloroethan	1,1-Dichloroethy.	1,2,3-Trichloropi	1,2-Dibromoetha	1,2-Dichlorobenz	1,2-Dichloroetha	1,2-Dichloroprop	1,2-trans-Dichlor	1,3-Dichlorobenz	1,3-cis-Dichlorop	1,3-trans-Dichlor	1,4-Dichlorobenz	2-Chloroethylvin	2-Chlorotoluene	4-Chlorotoluene	Bromobenzene	Bromochloromet	Bromodichlorom	Bromoform	Carbon Tetrachic	Chlorobenzene	Chloroethane	Chloroform	<b>Dibromochloron</b>	Dibromomethane	Methyl bromide	Methyl chloride	Methylene chlon	Tetrachloroethyl	Trichloroethylen	Vinyl chloride	

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

Control Cont	Decorporation   Decorporatio	LOCATOR: SAMPLE ID: COLLECTION DATE	LOCATOR: AMPLE ID: 1 ION DATE:	SB11 PC-CG3-SB11-S 08/26/93	-SS10-12 13	SB12 PC-CG3-SB12-S 08/26/93	-SS04-06 13	SB12 PC-CG3-SB12-S 08/26/93	.SS10-12 3	LOCATOR: SB11 SB12 SB12 SB13 SB13 SB13 SB13 SB13 SB13 SB13 SB13	SS02-04	SB13 PC-CG3-SB13-S 08/26/93	SS04-06 3	SB13 PC-CG3-SB13-S 08/26/93	-SS08-10 33	_
Activity Parameter gights 150 U 140 U 150	Activity Devices a consideration of the control of		UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	
The color of the	The color   The									,		•	·	ć		
Traces ug/kg 130 U 104 B 130 U 150 U 150 U 150 U 150 U 100 B 0.01 U 150	Section   Signature   Signat	Dichlorobenzene	ag/kg	1.80		1.40	•	1.50		2.20		9.1. 9.3.		0.0		
The color of the	Traction wighting 1.90 U 1.90	Dimethylbenzene	ug/kg	1.30		0.14		1.30		1.30		0.0		6.U		
ug/kg         3.0         ug/kg         3.0         ug/kg         3.0         ug/kg         3.0         ug/kg         3.0         ug/kg         1.00         ug/kg         1.00         ug/kg         1.00         ug/kg         1.00         ug/kg         1.00         ug/kg         ug/kg         1.00         ug/kg         ug/kg         1.00         ug/kg	The color	Dichlorobenzene	ug/kg	1.90		1.90		1.90		1.90		1.90		1.9		
ylectrone ug/kg 130 U 330 U 340 U 340 U 340 U 340 U 0.00    recene ug/kg 150 U 1.90 U	ylbenzeine ug/kg 13.0 U 13.0 U 1.50 U 1.50 U 1.50 U 0.00 H 1.50 U	Dimethylbenzene	ug/kg	•		1		•		•		•		0.0	_	
tights         1.90         U         1.90         U         1.90         U         0.10         B         0.03           tistene         tights         1.50         U         1.50         U         1.50         U         1.50         U         1.60         U	ug/kg         1.90         U         1.40         U         1.40         U         1.50         U         1.40         U         1.90         U         1.90         U         1.40         U         1.50         U         1.40         U         1.40         U         1.50         U         1.40         U         1.50         U         1.40         U         1.40         U         1.40         U         1.40         U         1.40         U         1.40         U	1 4-Dimethylhenzene	ug/kg	3.3(		3.3(		3.40		3.40		3.30		•		
ug/kg         1.50         U	ug/kg         1-5         0         1-50         0         1-40         0         1-50         0         1-40         0         1-50         0	Dichlorobenzene	ug/kg	1.90		1.90		1.90		1.90		0.10		0.0		
ug/kg         1.50         U         1.50         U         1.50         U         1.40         U         1.50         U	ug/kg         150         U         140         U         150         U         140         U         150         U         140         U         150         U         140         U         150         U	Dimethylhenzene	110/160	1		•		٠		•		•		0.0	_	
Ether ug/kg 1:90 U 1:90	Eher ug/kg 1:90 U 1:90		110/kg	1.50		1.4		1.50		1.50		1.4		1.4		
Elbert ug/kg 1190 U 119	Ether ug/kg 1:90 U 1:90		110/kg	6		1.9		1.90		1.90		1.9		1.9		<b>.</b>
Ether   ug/kg   11   11   11   12   13   14   15   15   15   15   15   15   15	Ether   vg/kg	J. Contraction	10//ci	-		)61		1.90		1.90		1.9		1.9		_
Total part of the control between the large of the large of the control between the large of the large of the control between the large of the large	150   150	noemzene	94/9n	=		=		12		12		=======================================		=======================================		
Op/End         Section of the problems	og/kg         5.50         U         340         U <th< td=""><td>II) I-L-Dutyl Eurel</td><td>94/60 104/60</td><td></td><td></td><td>1.50</td><td></td><td>1.60</td><td></td><td>1.60</td><td></td><td>1.5(</td><td></td><td>1.5</td><td>_</td><td>_</td></th<>	II) I-L-Dutyl Eurel	94/60 104/60			1.50		1.60		1.60		1.5(		1.5	_	_
University   Uni	UgiNg 340 U		9 ()	3 5				<b>39 S</b>		5.60		0.13		0.7		
ug/kg         340         U	very Re         340         U         340         U <t< td=""><td>ene</td><td>8 33 33</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	ene	8 33 33													
ug/kg         340         U	te         ug/kg         340         U         340 <th< td=""><td>3/90</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	3/90														
ug/kg         340         U	ug/kg         340         U	Trichlombenzene	ug/kg	340	Ω	340	D	340	D	340	D	340	D	340	D	_
vig/kg         340         U         340         U <th< td=""><td>ug/kg         340         U         340         U</td><td>Dichlorobenzene</td><td>ug/kg</td><td>340</td><td>Ω</td><td>340</td><td>Ω</td><td>340</td><td>Ω</td><td>340</td><td>Þ</td><td>340</td><td>D</td><td>340</td><td><b>&gt;</b></td><td>_</td></th<>	ug/kg         340         U	Dichlorobenzene	ug/kg	340	Ω	340	Ω	340	Ω	340	Þ	340	D	340	<b>&gt;</b>	_
ug/kg         340         U	ug/kg         340         U	Dichlorobenzene	ug/kg	340	n	340	n	340	ם	340	Þ	340	<b>-</b>	340	<b>O</b> :	_
ug/kg         340         U	ug/kg         340         U	Dichlorobenzene	ug/kg	340	D	340	D	340	D	340	כ	340	Þ	340	ה ה	_
ug/kg         820         U         810         U         830         U         820         U         820           ug/kg         340         U         340	ug/kg         820         U         810         U         830         U         820         U         820           ug/kg         340         U         340	Oxyhis(1-Chloropropane)	ug/kg	340	ם	340	n	340	ם	340	ם	340	Þ	340	•	_
ug/kg         340         U	ug/kg         340         U	-Trichlorophenol	ug/kg	820	Ω	810	D	830	n	830	Ω	820	ים ב	820	<b>)</b> :	
ug/kg         340         U	ug/kg         340         U         340         U         340         U         340           ug/kg         340         U         340         U         340         U         340         U         340           ug/kg         340         U         340         U         340         U         340         U         340           ug/kg         340         U         340         U         340         U         340         U         340           ug/kg         340         U         340         U         340         U         340         U         340           ug/kg         340         U         340         U         340         U         340         U         340           ug/kg         340         U         340         U         340         U         340         U         340           ug/kg         340         U         340         U         340         U         340         U         340           ug/kg         340         U         340         U         340         U         340         U         340           ug/kg         340         U	-Trichlorophenol	ng/kg	340	ח	340	n	340	Ω	340	D	340	<b>&gt;</b> ;	340	<b>-</b> :	
ug/kg         340         U	ug/kg         340         U	Dichlorophenol	ug/kg	340	Ω	340	D	340	<b>)</b>	340	<b>:</b>	340	<b>&gt;</b> :	340	) <b>:</b>	
ug/kg         820         U         830         U         830         U         820         U         830         U         830         U         830         U         840         U	ug/kg         820         U         830         U         830         U         820         U         920           ug/kg         340         U         340         U         340         U         340         U         340         U         340           ug/kg         340         U         340         U         340         U         340         U         340           ug/kg         340         U         340         U         340         U         340         U         49           ne         ug/kg         340         U         340         U         340         U         340         U         49           re         ug/kg         340         U         340         U         340         U         340         U         340           ug/kg         340         U         340         U         340         U         340         U         340           ug/kg         340         U         340         U         3	Dimethylphenol	ug/kg	340	D	340	D	340	<b>D</b>	340	o :	340	<b>&gt;</b> :	340	<b>&gt;</b>	\ <b>-</b>
ug/kg         340         U	ug/kg         340         U         49           nc         ug/kg         340         U         340         U         340         U         340         U         49           nc         ug/kg         340         U         340         U         340         U         340         U         340           ug/kg         340         U         340         U         340         U         340         U         340           ug/kg         340         U         340         U         340         U         340         U         340           ug/kg         340 <td>Dinitrophenol</td> <td>ug/kg</td> <td>820</td> <td>ב</td> <td>810</td> <td>: כ</td> <td>830</td> <td><b>&gt;</b> :</td> <td>830</td> <td><b>)</b> :</td> <td>820</td> <td><b>&gt;</b></td> <td>940</td> <td>&gt; <b>=</b></td> <td>, <b>.</b></td>	Dinitrophenol	ug/kg	820	ב	810	: כ	830	<b>&gt;</b> :	830	<b>)</b> :	820	<b>&gt;</b>	940	> <b>=</b>	, <b>.</b>
ug/kg         340         U	ug/kg         340         U         49           ne         ug/kg         340         U         340         U         340         U         340         U         49           ng/kg         820         U         830         U         820         U         820         U         820           ug/kg         340         U         340         U         340         U         340         U         340           dine         ug/kg         340         U         340         U         340         U         340           dine         ug/kg         340         U         340         U         340         U         340 <td>Dinitrotoluene</td> <td>ug/kg</td> <td>340</td> <td>n</td> <td>340</td> <td>D ·</td> <td>340</td> <td><b>)</b></td> <td>340</td> <td><b>&gt;</b> :</td> <td>340</td> <td><b>;</b></td> <td>40</td> <td>) <b>:</b></td> <td></td>	Dinitrotoluene	ug/kg	340	n	340	D ·	340	<b>)</b>	340	<b>&gt;</b> :	340	<b>;</b>	40	) <b>:</b>	
ug/kg         340         U	ug/kg         340         U	Dinitrotoluene	ug/kg	340	D	340	Þ	340	<b>&gt;</b> :	340	<b>)</b> ;	340	<b>-</b>	340	> <b>=</b>	· -
ug/kg         340         U         340         U         340         U         340         U         340           ug/kg         820         U         810         U         830         U         830         U         820           ug/kg         340         U         340         U         340         U         340         U         49           ug/kg         820         U         830         U         830         U         820         U         820           ug/kg         340         U         340         U         340         U         340           ug/kg         340         U         340         U         340         U         340           ug/kg         340         U         340         U         340         U         340	ug/kg         340         U         820         U         820         U         820         U         820         U         820         U         820         U         49           ug/kg         340         U         340         U         340         U         340         U         340         U         340           ug/kg         340         U         340         U         340         U         340         U         340           ug/kg         340         U         340         U         340         U         340         U         340           ug/kg         340         U         340         U         340         U         340         U         340	lloronaphthalene	ug/kg	340	Þ	340	<b>-</b>	340	n	340	>	340	<b>&gt;</b>	340	<b>&gt;</b> :	٠.
ug/kg         820         U         810         U         830         U         820         U         820           ug/kg         340         U         340         U         340         U         340         U         49           ug/kg         820         U         810         U         830         U         820         U         820           ug/kg         340         U         340         U         830         U         820         U         820           ug/kg         340         U         340         U         340         U         340         U         340           ug/kg         340         U         340         U         340         U         340	ug/kg         820         U         810         U         830         U         820         U         820           ug/kg         340         U         340         U         340         U         340         U         49           ug/kg         820         U         810         U         830         U         820         U         820           ug/kg         340         U         340         U         340         U         340         U         820           ug/kg         340         U         340         U         340         U         340         U         340           ug/kg         340         U         340         U         340         U         340	lorophenol	ug/kg		Ω	340	n	340	D	340	D	340	<b>D</b> :	340	o :	ς.
ug/kg         340         U         340         U         340         U         340         U         49           ug/kg         340         U         340         U         340         U         340         U         340           ug/kg         320         U         810         U         830         U         820         U         820           ug/kg         340         U         340         U         340         U         340         U         340           ug/kg         340         U         340         U         340         U         340	ug/kg         340         U         340         U         340         U         340         U         49           ug/kg         340         U         340         U         340         U         340         U         340           ug/kg         340         U         340         U         340         U         340         U         340           ug/kg         340         U         340         U         340         U         340         U         340	ethyl-4.6-Dinitrophenol	ug/kg		n	810	D	830	D	830	ם	820	D	820	<b>&gt;</b>	_
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	ug/kg         340         U         820         U	eth vinachthalene	ug/kg		ם	340	Ω	340	ם	340	ם	340	D	49	.	
ug/kg         820         U         810         U         830         U         820         U         820           ug/kg         340         U         340         U         340         U         340         U         340           serzidine         ug/kg         340         U         340         U         340         U         340	ug/kg         820         U         810         U         830         U         820         U         820           ug/kg         340         U         340         U         340         U         340         U         340           venzidine         ug/kg         340         U         340         U         340         U         340	ethylphenol	ug/kg		ם	340	Ω	340	ם	340	Ω	340	<b>-</b>	340	<b>&gt;</b> :	_
ug/kg         340         U         340         U         340         U         340           verzidine         ug/kg         340         U         340         U         340         U         340	ug/kg         340         U         340         U         340         U         340           venzidine         ug/kg         340         U         340         U         340         U         340	troaniline	ug/kg		n	810	D	830	D	830	D	820	Þ	820	<b>&gt;</b> ;	ت
ug/kg 340 U 340 U 340 U 340 U 340 U 340	ug/kg 340 U 340 U 340 U 340 U 340	trophenol	ug/kg		Ω	340	D	340	Ω	340	Ω	340	Þ	340	<b>)</b>	ь,
		-Dichlorobenzidine	ug/kg		Ω	340	Ω	340	Ω	340	D	340	ם	340	Þ	_
			ı													

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

SS08-10	QUAL	Ω	Þ	Þ	ם	D	n	Þ	n		D							D			Ω	D	D	1	Ω	n			n	D	n	Þ		D	Þ	n	
SB12 SB13 SB13 SB13 SB13 SB13 SB13 PC-CG3-SB13-SS04-06 PC-CG3-SB13-SS04-06 PC-CG3-SB13-SS08-10 08/26/93 08/26/93 08/26/93 08/26/93	RESULT	820	340	340	340	340	340	820	820	190	340	310	520	350	770	110	170	340	230	530	340	340	340	150	340	340	1400	220	340	340	340	340	190	340	340	340	170
SS04-06 ]	QUAL	D	n	Ω	D	Þ	n	Þ	Þ	D	D	Þ	n	D	n	n	Þ	D	D	n	D	D	Ω	n	D	n	D	Þ	n	D	n	n	n	n	Ω	D	Ω
SB13 PC-CG3-SB13-S 08/26/93	RESULT	820	340	340	340	340	340	820	820	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340
-SS02-04 )3	QUAL	n	n	D	Ω	Ω	Ω	n	Ω	Þ	D	Þ	n	D	Ω	Ω	Ω	Ω	Ω	Ω	n	n	Ω	Ω	Ω	Ω	Þ	D	D	D	D	n	Ω	Þ	D	n	Ω
SB13 PC-CG3-SB13-S 08/26/93	RESULT	830	340	340	340	340	340	830	830	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340
-SS10-12 13	QUAL	Ω	n	Ω	Ω	n	Ω	ם	n	D	Ω	n	n	n	Ω	Ω	D	n	D	O	n	Ω	Ω	Ω	D	Ω	n	n	Ω	n	ם	Ω	n	D	D	ם	D
SB12 PC-CG3-SB12-S 08/26/93	RESULT	830	340	340	340	340	340	830	830	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340
-SS04-06	QUAL	Ω	n	Ω	n	n	Ω	n	Ω	ם	ב	n	Þ	n	Ω	D	D	D	D	Ω	D	D	n	Ω	Ω	Ω	n	Ω	ם	Ω	Ω	D	D	Ω	D	D	D
SB12 PC-CG3-SB12-S 08/26/93	RESULT	810	340	340	340	340	340	810	810	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340
	QUAL	ם	n	n	Ω	D	Ω	D	D	D	D	D	D	n	Ω	Ω	ם	Ω	Ω	n	Ω	D	ם	D	n	D	D	D	D	Ω	D	Ω	Ω	Ω	n	Ω	Þ
LOCATOR: SB11 SAMPLE ID: PC-CG3-SB11-SS10-12 TION DATE: 08/26/93	RESULT	820	340	340	340	340	340	820	820	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340
LOCATOR: AMPLE ID: I	UNITS:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
LOCATOR SAMPLE ID COLLECTION DATE	. '	3-Nitroaniline	4-Bromophenyl phenyl ether	4-Chloro-3-methyl phenol	4-Chloroaniline	4-Chlorophenyl phenyl ether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(ghi)perylene	Benzo(k) fluoranthene	Butyl benzyl phthalate	Carbazole	Chrysene	Di-n-butyl phthalate	Di-n-octyl phthalate	Dibenzo(a,h)anthracene	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-c,d)pyrene	Isophorone	N-Nitrosodi-N-Propylamine	N-Nitrosodiphenylamine	Naphthalene

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

LOCATOR: SAMPLE ID: COLLECTION DATE:	LOCATOR: AMPLE ID: 1 ION DATE:	SB11 PC-CG3-SB11-08/26/93	SS10-12	LOCATOR: SB11 SAMPLE ID: PC-CG3-SB11-SS10-12 PC-CG3-SB12-SS04-06 TION DATE: 08/26/93 08/26/93	\$204-06		SS10-12 3	SB12 SB13 SB13 SB13 PC-CG3-SB13-SS02-04 PC-CG3-SB13-SS04-06 08/26/93 08/26/93 08/26/93	S02-04	SB13 PC-CG3-SB13-S 08/26/93	SS04-06 3	SB13 PC-CG3-SB13-SS08-10 08/26/93	-SS08-10 3
f	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Nitrohonzene	110/160	340	n	340	n	340	D	340	מ	340	ם	340	D
Pentachlomonhenol	9 (8) 1(0/K)	820	o ם	810	ם	830	n	830	ם	820	n	820	Þ
Phenanthrens	ug/kg	340	o D	340	ם	340	ב	340	D	340	D	1500	
Phenol	ug/kg	340	ם	340	ם	340	Ω	340	D	340	Þ	340	n
Pyrrene	ug/kg	340	n	340	ם	340	Ω	340	n	340	ח	1000	
bis(2-Chloroethoxy)methane	ug/kg	340	D	340	n	340	n	340	D	340	D	340	Ω
bis(2-Chloroethyl) ether	ug/kg	340	D	340	D	340	O	340	ם	340	Þ	340	D
bis(2-Ethylhexyl)phthalate	ug/kg	210		340	ם	45		37		340	n	340	D
METALS													
	64/6w	•		•		•		1		•		•	
	4.1	4 70	Ш	4 60	15	4.70		4.70	UL	4.60		4.70	
		0.42		0.41	ם	0.42	ב	0.68	0	0.41	n	0.49	<b>3</b>
		•		į				ı		•		•	
E		0.42		0.41	Ω	0.42		0.42	n	0.41		0.41	
	٠, ,	0.52	J.	0.52	ΩĽ	0.53	'n	0.52	ΩΓ	0.52	d'L	0.52	nr a
Calcium	mg/kg	1		•		•		•		,		•	
F		2.20		2.90		2.60		4.90		3.10		2.8	_
He		0.01	Ω	0.01	n	0.01	n	0.01	D	0.0	ם	•	
Cobalt		1		ı		•		•		1 1		•	٠
Copper	mg/kg	1.60	ם -	2.70		1.60	<b>&gt;</b>	1.90	0	3.10	_	2.70	<b>-</b>
Iron	mg/kg	• •		•				1		, ,			•
	mg/kg	0.92		0.93		1.20	_	5.50		χ.ο Ο	•	1.2	,
	mg/kg	1		ı		•		ı		•		•	
Se	mg/kg	+ (		•		, ,		' '	:	, 6		' 6	
<b>,</b>	mg/kg	0.10		0.10		0.11	<b>)</b>	0.10	<b>)</b> :	0.10	) :	1.0	) :
	mg/kg	3.70	<b>-</b>	3.60	)	3.70		3.70	>	3.00		3.00	
	mg/kg				:	' 6		, 0	:				
Selenium	mg/kg	0.31		16.0	<b>&gt;</b>	75.0	•	0.31	3:		· :		
Silver	mg/kg	0.42	<b>D</b>	0.41	)	0.42	)	0.42	<b>-</b>	0.41		4.0	
Sodium	mg/kg	1		•		•		1 (	;	' (		' 6	
Thallium	mg/kg	0.31	ď	0.31	Þ	0.32	d i	0.31	>	0.31	<b>-</b>	16.9	70 I
Vanadium	mg/kg	•		• ;		•		' '	1	, ,		' ;	
Zinc	mg/kg	5.40	<b>B</b>	16	<b>m</b>	4.70	<b>m</b>	10.70	m	65.30	9	11.60	<b>29</b>
Test													
Total Permienm Hydmearhons	mø/kø	6.30	Ω	6.30	Ω	39.20	_	9.90		31.30	0	38.80	0
	) )												

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

COLLEC	LOCATOR: SB13 SAMPLE ID: PC-CG3-SB13-S COLLECTION DATE: 08/26/93	SB13 PC-CG3-SB13-S 08/26/93	.SS10-12 3	SB2 PC-HN8-SB2-SS01-02 08/13/93	SS01-02	SB2 PC-HN8-SB2-SS02-03 08/13/93	-SS02-03 93	SB2 PC-HN8-SB2-SS09-10 08/13/93	-SS09-10 93	SB3 PC-HN8-SB3-SS01-02 08/13/93	SS01-02 3	SB3 PC-HN8-SB3-SS09-11 08/13/93	-SS09-11 33	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	
8010 Taireathonathan		0	=	0 03	=	70 0	1	0 03	=	۵	0			
1,1,1,2-1 ettacillotoculaile   1 1-Trichlomethane	9 63/65 9 7/65	4.0 0.0	۵ <b>د</b>	80.0		70.0		0.53	, m	4 م	70.0			
1.1.2. Totachloroshene	44/5m	0.10	2 =	0.63	a =	9.0		64.0	3 =	4 6	פי פ			
1.7.Trichlomethane	8 (8/ kg	68.0	=	88.0	. =	0.80		20.0	7 8	<b>ά</b> α	28.0	3 5		
1-Dichloroethane	119/kg	0.28	=	0.77		0.78	· =	77.0	2 2	0.78	-		m /	_
.I-Dichloroethylene	ug/kg	0.89		0.88	) D	0.89	n 6	0.88	) D	0.89	ם	0.88		_
.2.3-Trichloropropane	ug/kg	0.94	n	0.93	n S	0.94	. A	0.93	O	2	0.93			
.2-Dibromoethane	ug/kg	1.40	) D	1.30	n (	1.40	n 0	1.30	<b>n</b> 0	~	1.3			
.2-Dichlorobenzene	ue/kg	1.50	n	1.40		1.5	n 0	1.4	n or	1.50	n		D 0	
,2-Dichloroethane	ug/kg	0.68	D	0.67	0 /	89.0	n 8	0.67	D 4	~				
.2-Dichloropropane	ug/kg	0.68	O S	0.67	n 2	0.68	n 8	0.67	D 4	8	0.67			
1,2-trans-Dichloroethylene	ug/kg	1.10	D (	1.10		1.1	0 O	1.1	D 0	1.10			U O	_
,3-Dichlorobenzene	ug/kg	0.05	B B	1.10	m c	1.10	n 0	1.1	n 0	1.10		1.1		_
1,3-cis-Dichloropropylene	ug/kg	0.99	ם c	0.98	D 8	0.99	O 6	0.0	n 80	0.99				_
1,3-trans-Dichloropropylene	ug/kg	0.89	n (	0.88	D 8	0.89	O 6	8.0	O 88	0.89				_
,4-Dichlorobenzene	ug/kg	0.07	7 B	1.40	n o	1.50	0 O	1.4	O 01	1.50			m o	_
2-Chloroethylvinyl ether	ug/kg	1.10	D (	1.10		1:1	n 0		n 01	~	1.1			
2-Chlorotoluene	ug/kg	-	D	-		-	D	-	n	-				_
4-Chlorotoluene	ug/kg	90.0	5 B	1.10	n o	=	n 0	1.1	n 01	1.10			m o	_
Bromobenzene	ug/kg	0.78	8 U	0.77	U L	0.78	Ω 8.	0.7	U 11	0.78				_
Bromochloromethane	ug/kg	0.94	φ 0	0.93	3 U	0.94	<b>D</b>	0.5	3 N	<b>&amp;</b>				
Bromodichloromethane	ug/kg	-	Ω	-	D	-	D	0.27	1 12	2	_			
Bromoform	ng/kg	0.94	<b>4</b>	0.93	3 O	0.94	74 U	6.0	3 O	<b>~</b>				
Carbon Tetrachloride	ug/kg	0.68	O 8	0.67	0 L	0.68	Ω 89	9.0	57 U	99.0				_
Chlorobenzene	ug/kg	0.94	4 U	0.93	3 UJ	0.94	U P	9.0	33 U	0.0	D t	9.0		_
Chloroethane	ug/kg	2.70	n o	2.7	<b>n</b> 0	2.7		2.7	O 0.	2.7	n (	2.7	m o	_
Chloroform	ug/kg	0.39		0.63	3 B	0.42	12 B	9.0		0.5			74 18	m
Dibromochloromethane	ug/kg	0.83		0.82		0.83	3 N	9.0		<b>~</b>	0.82			
Dibromomethane	ug/kg	0.94	4 U	0.93	3 U	0.94	04 U	0.5	93 U	6.0	4 U	0.5	3 CJ	_
Methyl bromide	ug/kg	2.90	<b>D</b> 0	2.90	<b>n</b> 0	2.90	n 00	2.9	Ω 06	2.9	<b>n</b> 0	2.5		_
Methyl chloride	ug/kg	2.60	n o	2.6		2.60		2.60		2.6(	<b>n</b> 0	2.0		_
Methylene chloride	ug/kg		0 B	1.40		-				1.60	<b>9</b>	0.48		<u></u>
Tetrachloroethylene	ug/kg	90.0	<b>B</b> 9	0.82	2 U	0.83		0.0	82 U	9.0	3 O	0.8		_
Trichloroethylene	ug/kg	0.03	3 B	8.0	2 U	0.0	33 U	0.82	82 U	0.8	3 O	0.0	ss us	=
Vinyl chloride	ug/kg		n 0	2.70		2.70		2.		2.70	<b>n</b> 0	2.7		=
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Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

309-11	QUAL	ם	æ	D		n	ח		n	=	•	٠;	) i	<b>2</b> 0	-		⊃	D	Þ	Þ	ם	Ω	D	D	D	D	D	D	ם	ם	ם	Þ	Þ	ם	D	11	•	
SB3 PC-HN8-SB3-SS09-11 08/13/93	RESULT	0.25	0.30	1.90	,	3.30	0.19	•	1.40		1.30	60.0 5	11	0.15	90.0		340	340	340	340	340	820	340	340	340	820	340	340	340	340	820	340	340	820	340	340	2	
	QUAL	-	- Δ	æ		D	Ø		=		,			_	_		ם	Þ	D	D	D	n	Ω	ם	ם	ם	ם	ם	Ω	D	D	ם	Þ	D	D	=	•	
SB3 PC-HN8-SB3-SS01-02 08/13/93	RESULT	5	0.12	200	;	3.30	0.13	;	1 40	2.1	0.12	0.10	11	1.60	0.28		340	340	340	340	340	830	340	340	340	830	340	340	340	340	830	340	340	830	340	2 6	240	
	QUAL	=		) <b>=</b>		-								D (	m		n	כ	ב	<b>5</b>	<b>=</b>	=	· =	) <u>-</u>	n	ם	ם	ב	D	D	n	n	ם	=	=	<b>)</b> ;	>	
SB2 PC-HN8-SB2-SS09-10 08/13/93	RESULT	-	1.20	9.1	06.1	3 30	5.0			<b>1.4</b> 0	1.90	1.90	=	1.50	0.25		340	340	340	340	340	820	340	340	340	820	340	340	340	340	820	340	340	000	340	340	340	
	QUAL	:	2 8				) <b>:</b>				<b>n</b>	n c	D	n c	~		Ω	=	=	=	=	<b>-</b>	) <b>:</b>	<b>:</b>	=	1	) D	1	=	=	ם מ	- 1	=	=	<b>:</b>	<b>)</b>	D	
SB2 PC-HN8-SB2-SS02-03 08/13/93	RESULT	6	0.07	0.03	<b>96.1</b>	, ,	5.50	0.1.0		1.5(	1.9	1.9	=	1.6	0.21		340	340	340	940	340	340	930	340	340	830	340	340	340	340	830	340	240	000	830	340	340	
	QUAL	:	_		n (		o;			n 0	4	5 3	ם	12			Ξ	) <b>:</b>	=	) <b>:</b>	<b>:</b>	<b>)</b> ;	<b>&gt;</b> :	> :	<b>-</b>	=	) <del> </del>	-	) <b>:</b>	<b>:</b>	> <b>=</b>	=	<b>:</b>	<b>&gt;</b> ;	<b>)</b>	O	n	
SB2 PC-HN8-SB2-SS 08/13/93	RESULT	,	1.50	Ò	g. 1 . 9	1 6	3.30	6.1	•	1.4	0.14	0.0	=	; <del>-</del>		7:0	340	240	340	040	340	340	820	340	340	046	240	24.0	240	340	340	970	340	340	820	340	340	
810-12	QUAL		<b>&gt;</b> :	>	ב	;	<b>D</b>	Þ		n	Ω	1	=	=	) <b>:</b>	>	:	o ;	<b>&gt;</b> :	<b>&gt;</b> :	<b>)</b>	<b>&gt;</b> :	<b>&gt;</b>	<b>&gt;</b> :	⊃:	<b>)</b>	<b>)</b>	<b>:</b>	<b>)</b> :	<b>:</b>	<b>&gt;</b> :	<b>;</b>	<b>)</b> ;	<b>-</b>	D	Þ	D	
LOCATOR: SB13 SB2 SAMPLE ID: PC-CG3-SB13-SS10-12 PC-HN8-SB2-SS01-02 TION DATE: 08/26/93 08/13/93	RESULT (		1.50	1.30	1.90	•	3.30	1.90	•	1.50	1.90	1 90		11	20.1	5.50	9,0	340	340	340	340	340	820	340	340	340	970	340	340	340	340	079	340	340	820	340	340	
LOCATOR: AMPLE ID: PC ION DATE:	UNITS:		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	o o	94,95	18/18 18/18	an/gn	ug/kg	ug/kg		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ng/kg	ug/kg	ng/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ng/kg	) )
LOCATOR: SAMPLE ID: COLLECTION DATE							2											Ü				ropane)										henol					4	!
ŏ		8020	1,2-Dichlorobenzene	1.2-Dimethylbenzene	1,3-Dichlorobenzene	1,3-Dimethylbenzene	1,3/1,4-Dimethylbenzene	1.4-Dichlorobenzene	1.4-Dimethylbenzene	Designa	Delizeiro	Chlorobenzene	Ethylbenzene	Methyl-t-Butyl Ether	Styrene	Toluene	CLP 3/90	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2,2'-Oxybis(1-Chloropropane)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methyl-4,6-Dinitrophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2.Nitrophenol	2 2 Dichlombenzidine	

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

COLLECT	LOCATOR: SB13 SAMPLE ID: PC-CG3-SB13-SS COLLECTION DATE: 08/26/93	SB13 PC-CG3-SB13-S 08/26/93	-SS10-12 93	SB2 PC-HN8-SB2-SS01-02 08/13/93	SS01-02	SB2 PC-HN8-SB2-SS02-03 08/13/93	SS02-03	SB2 PC-HN8-SB2-SS09-10 08/13/93	SS09-10	SB3 PC-HN8-SB3-SS01-02 08/13/93	.SS01-02	SB3 PC-HN8-SB3-SS09-11 08/13/93	SS09-11
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
3. Wiftcogniline	nø/kg	820	D	820	Ω	830	n	820	n	830	n	820	n
4-Bromophenyl phenyl ether	ug/kg	340	D	340	D	340	n	340	Ω	340	Þ	340	n
4-Chloro-3-methyl phenol	ug/kg	340	ר	340	n	340	Ω	340	ם	340	D	340	n
4-Chloroaniline	ug/kg	340	Ω	340	Ω	340	Ω	340	n	340	Þ	340	ם
4-Chlorophenyl phenyl ether	ug/kg	340	n	340	D	340	ם	340	n	340	Þ	340	<b>&gt;</b>
4-Methylphenol	ug/kg	340	D	340	Þ	340	D	340	n	340	D	340	ם י
4-Nitroaniline	ug/kg	820	Ω	820	Ω	830	Ω	820	n	830	Þ	820	ם
4-Nitrophenol	ug/kg	820	Ω	820	Ω	830	n	820	Þ	830	n :	820	D i
Acenaphthene	ug/kg	340	Ω	340	D	340	D	340	n	340	Þ	340	D :
Acenaphthylene	ug/kg	340	Ω	340	D	340	Ω	340	n	340	ם	340	D :
Anthracene	ug/kg	340	Ω	340	D	340	D	340	D	340	ם	340	n
Benzo(a)anthracene	ug/kg	340	n	340	Ω	340	n	340	ם	340	Þ	340	Þ
Benzo(a)pvrene	ug/kg	340	D	340	n	340	D	340	D	340	<b>D</b>	340	Þ
Benzo(b)fluoranthene	ug/kg	340	n	340	Ω	340	Ω	340	D	340	D	340	ם
Benzo(ghi)perylene	ug/kg	340	ב	340	ם	340	D	340	n	340	D	340	ם
Benzo(k)fluoranthene	ug/kg	340	Ω	340	D,	340	D	340	n	340	D	340	ם
Butyl benzyl phthalate	ug/kg	340	n	340	ם	340	n	340	Ω	340	Þ	340	ב
Carbazole	ay/an		n	340	Ω	340	Ω	340	Ω	340	D	340	Ω
Chrysene	ug/kg		Ω	340	D	340	D	340	n	340	<b>&gt;</b>	340	n
Di-n-butyl phthalate	ug/kg	340	n	340	D	340	Ω	340	n	340	D	340	n
Di-n-octyl phthalate	ug/kg		Ω	340	D	340	D	340	ב	340	n	340	ם
Dibenzo(a,h)anthracene	ug/kg		Ω	340	Ω	340	n	340	ח	340	P	340	D
Dibenzofuran	ug/kg	340	Ω	340	Ω	340	Ω	340	D	340	ם	340	Þ
Diethyl phthalate	ug/kg	340	n	340	Ω	340	ם	340	n	340	Þ	340	o ·
Dimethyl phthalate	ug/kg	340	ם	340	n	340	D	340	n	340	<b>)</b>	340	<b>&gt;</b> ;
Fluoranthene	ug/kg		Þ	340	n	340	D	340	Ω	340	) O	340	<b>:</b>
Fluorene	ug/kg		Ð	340	<b>&gt;</b>	340	ם	340	<b>)</b>	340	<b>)</b> ;	340	) <b>:</b>
Hexachlorobenzene	ug/kg	340	ם	340	D	340	Þ	340	Þ	340	<b>-</b>	340	<b>)</b>
Hexachlorobutadiene	ug/kg	340	Ω	340	n	340	Ω	340	Þ	340	<b>&gt;</b>	340	י כ
Hexachlorocyclopentadiene	ug/kg	340	מ	340	n	340	n	340	ם	340	<b>D</b>	340	Þ
Hexachloroethane	ug/kg	340	Ω	340	Ω	340	n	340	D	340	•	340	O
Indeno(1.2.3-c.d)pyrene	ug/kg	340	n	340	Ω	340	ם	340	D	340	Þ	340	D,
Isophorone	ug/kg	340	n	340	n	340	n	340	D	340	D	340	n
N-Nitrosodi-N-Propylamine	ug/kg	340	D	340	Ω	340	Ω	340	Ω	340	D	340	י ב
N-Nitrosodiphenylamine	ug/kg	340	n	340	Ω	340	n	340	Ω	340	₽	340	Þ
Naphthalene	ug/kg		ם	340	Ω	340	n	340	D	340	D	340	D

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

)-12	QUAL		Þ	Þ	ח	D	D	n	Ω	n	ם	D	D	n	Þ	ם	þ	D	Þ	Ω	D	D	D	D	n	Ω	D	ם	m	Ω	D	D	D	M	ם	ב	D	
38 38-SS1( 7/93			0.93	2.80	0.62	88.0	0.77	88.0	0.93	1.30	1.40	0.67	29.0	1.10	1.10	86.0	0.88	1.40	1.10		1.10	0.77	0.93		0.93	29.0	0.93	2.70	0.59	0.82	0.93	2.90	2.60	7.30	0.82	0.82	2.70	
SB8 PC-HN8-SB8-SS10-12 08/17/93	RESULT		0	7	0	0	0	0	0	-	-	0	0	-	1	0	0	_	-	-	-	•	0	-	0	0	0	7	0	Ü	Ŭ	-	•		J	J	•	
S09-10	QUAL		ם	Þ	ם	D	D	D	D	Þ	Þ	Þ	Þ	ם	D	D	ם	Ω	D	ם	D	Þ	כ	D	D	ב	Þ	ם	Ø	ח	כ	כ	n		n	D	ם	
SB8 PC-HN8-SB8-SS09-10 08/17/93	RESULT		0.93	2.80	0.62	0.88	0.77	0.88	0.93	1.30	1.40	0.67	0.67	1.10	1.10	0.98	0.88	1.40	1.10		1.10	0.77	0.93	-	0.93	19.0	0.93	2.70	0.62	0.82	0.93	2.90	2.60	2.70	0.82	0.82	2.70	
301-02	QUAL		Þ	æ	n	ם	ם	Þ	ם	ם	Þ	Þ	ם	D	ם	D	n	n	D	D	ם	D	D	n	D	Þ	ם	n	8	ם	D	ם	ם	<b>B</b>	D	n	D	
SB8 PC-HN8-SB8-SS01-02 08/17/93	RESULT		0.93	0.10	0.62	0.88	0.77	0.88	0.93	1.30	1.40	0.67	0.67	1.10	1.10	0.98	0.88	1.40	1.10	-	1.10	0.77	0.93	-	0.93	0.67	0.93	2.70	0.78	0.82	0.93	2.90	2.60	12	0.82	0.82	2.70	
312-13	QUAL		ם	æ	D	Ω	n	D	D	ם	D	ם	ם	n	Ω	ח	n	n	Ω	n	n	Ω	ם	ח	D	n	n	D	<b>m</b>	n	Ω	ם	n	æ	n	n	ם	
SB7 PC-HN8-SB7-SS12-13 08/15/93	RESULT		0.94	0.20	0.63	0.89	0.78	0.89	0.94	1.40	1.50	89.0	89.0	1.10	1.10	66.0	0.89	1.50	1.10	-	1.10	0.78	0.94	-	0.94	0.68	0.94	2.70	0.82	0.83	0.94	2.90	2.60	2.80	0.83	0.83	2.70	
512-13	QUAL		Þ	5	ū	ħ	ח	D	ñ	ם	5	n	D	Þ	D	ם	ם	'n	n	D	Ω	n	n	n	n	n	ם	ם	m	ח	D	n	ח	M	ב	D	n	
SB6 PC-HN8-SB6-SS12-13 08/15/93	RESULT		0.94	2.80	0.63	0.89	0.78	0.89	0.94	1.40	1.50	89.0	89.0	1.10	1.10	0.99	0.89	1.50	1.10	-	1.10	0.78	0.94	-1	0.94	89.0	0.94	2.70	0.51	0.83	0.94	2.90	2.60	5.70	0.83	0.83	2.70	
12-14	QUAL		5	n	5	'n	5	ī	'n	n	n	n	ħ	5	'n	5	5	ñ	5	ħ	5	5	'n	5	5	5	5	5	B	Б	n	5	5	æ	'n	Ð	ā	
SB4 PC-HN8-SB4-SS12-14 08/13/93	RESULT		96.0	2.90	0.64	0.00	0.80	0.90	96.0	1.40	1.50	69.0	0.69	1.20	1.20	-	06.0	1.50	1.20	1.10	1.20	0.80	96.0	1.10	96.0	69.0	96.0	2.80	0.20	0.85	96.0	6	2.70	0.43	0.85	0.85	2.80	
LOCATOR: SAMPLE ID: I COLLECTION DATE:	UNITS:		ng/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	
COLLE		8010	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1, 1, 2-Trichloroethane	1, 1-Dichloroethane	1,1-Dichloroethylene	1,2,3-Trichloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,2-trans-Dichloroethylene	. 1,3-Dichlorobenzene	1,3-cis-Dichloropropylene	1,3-trans-Dichloropropylene	1,4-Dichlorobenzene	2-Chloroethylvinyl ether	2-Chlorotoluene	4-Chlorotoluene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Dibromochloromethane	Dibromomethane	Methyl bromide	Methyl chloride	Methylene chloride	Tetrachloroethylene	Trichloroethylene	Vinyl chloride	

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

-12	ΑΓ	n	Þ	Þ		Ω	Þ		D	ם	ם	11	=	· :	>			Þ	Ω	=	) <b>;</b>	<b>;</b>	>	Þ	Þ	ם	D	Þ	Þ	Þ	Þ	D	Þ	n	, <b>=</b>	<b>;</b>	<b>&gt;</b> =	<b>;</b>	>		
SB8 PC-HN8-SB8-SS10-12 08/17/93	RESULT QUAL	1.40	1.20	1.90	•	3.30	1.90		1.40	1.90	1.90	=	9	S. 1	5.50			340	340	340	2	340	340	820	340	340	340	820	340	340	340	340	820	340	340	or c	078	340	340		
	QUAL	Þ	ם	D	)	D	D	)	n	n	=	=	<b>:</b>	)	>			n	=	:	<b>&gt;</b> :	>	Þ	D	Ω	D	ם	D	Þ	ם	Ω	ם	=	=	> =	<b>&gt;</b> :	<b>&gt;</b>	>	Þ		
SB8 48-SB8-SS0 08/17/93		1.40	1.20	1.90		3.30	1.90		1.40	06.1	6	? :		06.1	5.50			04	340	2 5	<b>3</b>	340	340	810	340	340	340	810	340	340	340	340	013	940	250	340	810	340	340		
SB8 PC-HN8-SB8-SS09-10 08/17/93	RESULT																	•	. "	3 6	• •	۲.,	***	_																	
	QUAL	ם	ם	=	)	Ω	=	)	1	=	<b>:</b>	<b>;</b>	>	<b>&gt;</b>	Þ			=	=	<b>&gt;</b> ;	>	Þ	Þ	ם	ב	D	1	כו	=	=	=	=	) <b>;</b>	<b>)</b>	<b>)</b>	D	D	Þ	Þ		
SB8 PC-HN8-SB8-SS01-02 08/17/93	RESULT Q	1.40	1.20	00	OK: 1	3 30	90.1	06.1	1.40	00.1	06.1	1.90	11	1.50	5.50			340	240	340	340	340	340	820	340	340	340	820	340	340	240	340	0.40	078	340	340	820	340	340		
		=	· =	· :	<b>-</b>	=	<b>.</b>	<b>-</b>	=	<b>:</b>	<b>&gt;</b> ;	<b>-</b>	Þ	n	~	ı		=	<b>&gt;</b> :	o	n	n	=	· =	) <b>=</b>	<b>=</b>	<b>-</b>	<b>=</b>	) <b>:</b>	o =	o :	<b>&gt;</b> :	<b>;</b>	Þ	>	n	n	ם	n		
7-SS12-1 93	QUAL	Ş			06:1	, ,		1.90	9	0.1	3 :	1.90		1.60	0.21	1															_ ,	<u> </u>		_	0	0	0	0			
SB7 PC-HN8-SB7-SS12-13 08/15/93	RESULT	-	-	•	ä	٠ ،		=	· -	<b>:</b> .	<b>∴</b>	<b>-</b>	11	-	· C		•	0,0	340	340	340	340	340	930	930	24.0	3	94.0	93.	340	¥2.	346	340	83	34	340	830	34	34		
	QUAL	:	<b>)</b> :	<b>)</b>	G	:	<b>)</b>	Ω	:	)	>	ב	Ω	=	=	3		;	<b>&gt;</b>	n	n	=	) <b>:</b>	) :	<b>)</b> :	<b>:</b>	<b>)</b> :	<b>:</b>	<b>)</b> ;	<b>)</b>	<b>)</b>	)	⊃	D	n	ח	Ω	Ξ	=		
SB6 PC-HN8-SB6-SS12-13 08/15/93	result Q		05.1	1.30	1.90	1 (	3.30	1.90	•	1.50	1.90	1.90	11	1 60	00:1	0			340	340	340	340	340	340 930	830	340	340	340	830	340	340	340	340	830	340	340	830	340	340	È.	
		;	<b>.</b>	<b>m</b>	D		Þ	Þ		<b>&gt;</b>	Þ	ם		Ξ	۱ د	Σq.			D	ם	=	) <b>:</b>	<b>&gt;</b> :	<b>)</b> ;	<b>D</b>	<b>)</b>	<b>5</b>	<b>&gt;</b>	Þ	כ	D	n	Þ	n	Ω	=	=	) <b>:</b>	<b>:</b>	>	
:4 :4-SS12-14 3/93	QUAL	;	1.50	0.13	1.90		3.40	0.31		1.50	06:1	1.90	. 19	10.	3 5	0.19			0	0			<b>,</b>	0	0	0	0	Ö	0	0	350	350	350	850	350	350	050	2 5	920	950	
SB4 PC-HN8-SB4-SS 08/13/93	RESULT			0		•	e	0	•	_		_		, -	- '	•			350	350																					
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	119/kg	91/95	gy/gn	ng/kg	ug/kg			ug/kg	0.1/00	u Ei NE	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	110/kg	001 001	Z :	20 (A. 18) 10 (A. 18) 10 (A. 18)	ga/gu	ng/kg	ug/kg	
I SV LLECTI							v																	ropane)										7						0	
8			zene	nzene	Zene	nzene	vlbenzen	nzene	nzene					Ether					henzene		nzene	nzene	auzene	Chloropi	ophenol	ophenol	henol	henol	lou	Jene	lene	halene	7		doniiio ·	halene	jo			benzidin	
			1.2-Dichlorobenzene	1.2-Dimethylbenzene	1.3-Dichlorobenzene	1.3-Dimethylbenzene	3/1 4-Dimethylbenzene	1,4-Dichlorobenzene	1.4-Dimethylbenzene		Chlorobenzene	OCIECIIA	Ethylbenzene	Methyl-t-Butyl Ether	U	ച്ച		06/	1 2 4 Trichlomhenzene	11111111	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2,2'-Oxybis(1-Chloropropane)	2.4.5-Trichlorophenol	2.4.6-Trichlorophenol	2.4-Dichlorophenol	2.4-Dimethylphenol	2.4-Dinitrophenol	2.4-Dinitrotoluene	2 6-Dinitrotoluene	2, Chloronanhthalene	2 Chlorophenol	noiobilen	7-Memyl-4,0-minuopinensi	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	
		8020	1.2-Dik	1 2-Din	13-Di	1.3-Di	1 3/1 4	. 4. . Q	1.4-Di	Renzene	Or I do		Emylo	Methy	Styrene	Toluene		CL P 3/90	1 2	1,4	1,2-D	1,3-D	1.4 D	2,2,-	2.4.5	2.4.6	2.4-D	2.4-L	2.4-E	2.4-E	7.6-	֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓	֓֞֞֞֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓	֓֞֞֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓	W-7	7-W	5-M	Z	Z'Z	3,3	

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

LOCATOR: SAMPLE ID: COLLECTION DATE:		SB4 PC-HN8-SB4-SS12-14 08/13/93	.SS12-14 33	SB6 PC-HN8-SB6-SS12-13 08/15/93	SS12-13	SB7 PC-HN8-SB7-SS12-13 08/15/93	-SS12-13 93	SB8 PC-HN8-SB8-SS01-02 08/17/93	SS01-02	SB8 PC-HN8-SB8-SS09-10 08/17/93	.SS09-10	SB8 PC-HN8-SB8-SS10-12 08/17/93	SS10-12
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4. Nitrosmitine	u9/kg	850	D	830	n	830	Ω	820	D	810	n	820	Þ
4-Bromonhenvi phenvi ether	ug/kg	350	D	340	Ω	340	n	340	D	340	n	340	D
4-Chloro-3-methyl phenol	ug/kg	350	ם	340	Ω	340	D	340	D	340	ם	340	Ω
4-Chloroaniline	ug/kg	350	Ω	340	Ω	340	D	340	Ω	340	ם	340	D
4-Chlorophenyl phenyl ether	ug/kg	350	D	340	ם	340	Þ	340	Þ	340	n	340	ם
4-Methylphenol	ug/kg	350	Ω	340	Ω	340	Ω	340	Þ	340	D i	340	<b>&gt;</b> ;
4-Nitroaniline	ug/kg	850	D	830	ם	830	Þ	820	ם	810	<b>&gt;</b>	820	י כ
4-Nitrophenol	ug/kg	850	D	830	n	830	Ω	820	כ	810	י c	820	<b>:</b>
Acenaphthene	ug/kg	350	Ω	340	ח	340	ם	340	D	340	: כ	340	o :
Acenaphthylene	ug/kg	350	n	340	ח	340	D	340	י כ	340	Þ i	340	<b>)</b> ;
Anthracene	ug/kg	350	D	340	n	340	D	340	ם	340	0	340	<b>)</b>
Benzo(a)anthracene	ug/kg	350	Ω	340	ם	340	Ω	340	Þ	340	ρ.	340	e ;
Benzo(a)pyrene	ug/kg	350	n	340	ם	340	n	340	5	340	)	340	Þ
Benzo(b)fluoranthene	ug/kg	350	Ω	340	Ď	340	n	340	5	340	Þ	340	<b>D</b> :
Benzo(ghi)perylene	ug/kg	350	Ω	340	ם	340	P	340	5	340	<b>&gt;</b>	340	<b>D</b> :
Benzo(k)fluoranthene	ug/kg	350	n	340	ם	340	Þ	340	5	340	)	340	<b>-</b> ;
Butyl benzyl phthalate	ug/kg	350	Ω	340	n	340	D	340	n	340	: כ	340	<b>D</b> :
Carbazole	ug/kg	350	D	340	D	340	D	340	Þ	340	<b>&gt;</b>	340	<b>)</b>
Chrysene	ug/kg	350	Ω	340	Ω	340	D	340	D	340	<b>D</b>	340	<b>&gt;</b> :
Di-n-butyl phthalate	ug/kg	350	D	340	Ω	340	Ω	340	ם	36	<b>-</b>	340	<b>:</b>
Di-n-octyl phthalate	ug/kg		Ω	340	ב	340	Þ	340	5	340	<b>D</b> :	340	<b>-</b> ;
Dibenzo(a,h)anthracene	ug/kg		n	340	n	340	n	340	5	340	D :	340	<b>)</b>
Dibenzofuran	ug/kg		Ω	340	D	340	<b>:</b>	340	<b>&gt;</b>	340	o:	340	<b>-</b> :
Diethyl phthalate	ug/kg		n	340	ם	340	n	340	<b>O</b> :	340	<b>&gt;</b> :	340	o ;
Dimethyl phthalate	ug/kg		D	340	D	340	<b>)</b>	340	o :	340	<b>&gt;</b> ;	340	<b>&gt;</b>
Fluoranthene	ug/kg		Þ	340	⊃	340	Þ	340	<b>)</b>	340	o ;	340	<b>:</b>
Fluorene	ug/kg		D	340	ם	340	D	340	<b>&gt;</b>	340	<b>)</b> ;	340	<b>)</b> ;
Hexachlorobenzene	ug/kg		n	340	⊃	340	O	340	D	340	<b>)</b>	340	<b>&gt;</b> ;
Hexachlorobutadiene	ug/kg		D	340	Ω	340	D	340	ח	340	<b>&gt;</b>	340	<b>)</b> ;
Hexachlorocyclopentadiene	ug/kg	350	Ω	340	Ω	340	D	340	<b>&gt;</b>	340	Þ	340	D :
Hexachloroethane	ug/kg	350	n	340	Ω	340	Ω	340	D	340	Þ	340	e :
Indeno(1,2,3-c,d)pyrene	ug/kg	350	Ω	340	n	340	Ω	340	5	340	<b>&gt;</b>	340	D.
Isophorone	ug/kg	350	Ω	340	n	340	Ω	340	D	340	ם	340	Þ
N-Nitrosodi-N-Propvlamine	ug/kg	350	ם	340	ם	340	n	340	D	340	ם	340	n
N-Nitrosodiphenylamine	ue/ke	350	D	340	n	340	Þ	340	Ω	340	D	340	ם
Nanhthalene	nø/kø		Ω	340	Ω	340	Ω	340	D	340	n	340	<b>n</b>

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

LOCATOR: SAMPLE ID: COLLECTION DATE:		SB4 PC-HN8-SB4-S: 08/13/93	SS12-14	SB6 PC-HN8-SB6-SS12-13 08/15/93	\$\$12-13 3	SB7 PC-HN8-SB7-SS12-13 08/15/93	SS12-13	SB8 PC-HN8-SB8-SS01-02 08/17/93	\$\$01-02 3	SB8 PC-HN8-SB8-SS09-10 08/17/93		SB8 PC-HN8-SB8-SS10-12 08/17/93	.SS10-12 13
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
	3. M. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	360	Ξ	340	Ω	340	D	340	Ω	340	n	340	D
Nitrobenzene	8 1/8n	950	=	830	<b>=</b>	830	D	820	n	810	ם	820	D
Pentachlorophenol	agy/gn gy/gn	350	) <b>)</b>	340	סס	340	Ω	340	Ω	340	D	340	י כ
Frenandrene	2	350	) <b>=</b>	340	=	340	Ω	340	n	340	ם	340	D
Phenoi	ug/kg	350	=	340	ם מ	340	כי	340	Ω	340	n	340	D
Pyrene	20 24 20 21	360	=	340	=	340	Ω	340	Ω	340	ם	340	ם
bis(2-Chloroethoxy)methane	ug/kg	350	<b>=</b>	340	<b>&gt;</b> =	340	o D	340	D	340	Ω	340	Þ
bis(2-Chloroethyl) ether his(2-Fihvlhexyl)phihalate	ug/kg ug/kg	350	ם ס	340	D	340	D	340	D	340	Þ	35	Ø
	,												
METALS												•	
Aluminum	mg/kg	1040		•						•	=======================================	4 60	
Antimony	mg/kg	4.80	<b></b>	4.70	⊃	4.70	or or	0/.4	ה ה	4.60		95.0	2 6
Arsenic	mg/kg	0.56		1.20	<b>В</b>	0.52		07.1		<b>†</b>		:	
Baríúm	mg/kg	2.60	0;	1 (		' 6		. 0	=	0.41		0.41	1 O
Beryllium	mg/kg	0.43		0.42		0.42	) t	14:0		0.52	0 0	0.52	_
Cadmium	mg/kg	0.53		0.52	7 O.L	75.0		76.0					
Calcium	mg/kg	39400				٠, د	-	2 7	_	2.20	_	2.90	0
Chromium	mg/kg	2.70		1.70		7.7	2 5	2.5	=	0.0	ח	0.01	n I
Chromium, Hexavalent	mg/l	0.01		0.0	0 1	0.0		· ·		; ,			
Cobalt	mg/kg		o:		=		-	2.80		1.50	n 0	1.80	0
Copper	mg/kg	00.1	_	Ď. 1				,		1		•	
Iron	mg/kg ma/ko	0/17	_	0.72	2 B	1	B	1.10	<b>B</b>	0.76	6 B	0.88	<b>8</b> 2
Messagina	mo/ko	5520		•		•		•		•		•	
Manganese	mg/kg	48.60	_	•		•		1		1 (		, ,	
Mercura	mg/kg	0.11	n I	0.10		0.10		0.10	o :	0.10		0.10	2 5
Nickel	mg/kg	3.70		3.60	O O	3.60	n 00	3.60		3.60	9	3.00	
Potassium	mg/kg	243		•				' 6		. 0		0.31	11
Selenium	mg/kg	0.32		0.31		0.31		0.31	• :	15.0	-	0.41	_
Silver	mg/kg	0.43		0.42	.2 UL	0.42	70 Zt	0.41				; ·	
Sodium	mg/kg	64.90	0	•		, (		' 6	=======================================	, 0	111	0.31	31 UL
Thallium	mg/kg			0.31	To I	0.31	31 OL	0.31				; •	
Vanadium	mg/kg	4.10	0	1 1		, ,		· -	2	7 30	2	Α,	5.80 B
Zinc	mg/kg	4.6		6.80	9	oc.c	20.00	1.11				•	
nat											,	;	9
Total Petroleum Hydrocarbons	mg/kg	7.30	<b>B</b> 0	147		12		23.10	0	16.40	<b>Q</b>	Ė	11.20

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

<b>2-12</b>	QUAL		Þ		ם	ם	n	Ω	D	ח	Ω	ם	Ω	n	D	n	n	Ω	Ω	Ω	D	D	n	D	D	n	ם	Þ	Ø	ח	ם	D	ם	æ	ם	ם	ם	
SB10 9-SB10-SS1( 11/12/92			0.93	0.13	0.62	0.88	0.77	88.0	0.93	1.30	.40	.67	.67	1.10	01.10	36.0	88.	1.40	1.10		1.10	7.77	0.93	1	7.93	79.(	7.93	2.70	1.30	7.82	3.93	2.90	2.60	1.70	0.82	0.82	2.70	
SB10 PC-RT9-SB10-SS10-12 11/12/92	RESULT		0	0	0	0	0	0	J	_	_	0		_	_	_	_		-	_		J	J		J	J	•	.,		J	J	•	•••		•	•	•	
S15-17	QUAL		ħ	5	Ð	'n	5	5	'n	ā	5	5	5	5	n	5	S	5	5	5	5	5	5	n	5	Ð	5	5	8	5	5	Ð	5	89	5	Ð	5	
SB9 PC-RT9-SB9-SS15-17 11/12/92	RESULT		-	3.10	0.70	0.99	0.87	0.99	1	1.50	1.60	0.76	0.76	1.30	1.30	1.10	0.99	1.60	1.30	1.20	1.30	0.87	1	1.20		0.76	-	3	1.80	0.93	-	3.30	2.90	1.50	0.93	0.93	e	
15-17	QUAL		5	M	n	'n	5	S	5	5	5	n	5	'n	5	5	5	n	n	5	n	5	'n	5	5	n	5	5	æ	5	n	n	Ō	æ	5	Ð	5	
SB8 PC-RT9-SB8-SS15-17 11/12/92	RESULT		0.94	0.11	0.63	0.89	0.78	0.89	0.94	1.40	1.50	0.68	0.68	1.10	1.10	0.99	0.89	1.50	1.10	-	1.10	0.78	0.94	-	0.94	89.0	0.94	2.70	0.86	0.83	0.94	2.90	2.60	2.90	0.83	0.83	2.70	
	QUAL		Þ	20	Þ	Þ	ם	ם	n	D	Þ	n	Ω	n	D	D	D	Ω	D	D	n	n	D	ם	D	ם	ם	D	æ	D	ם	Þ	D	æ	D	D	n	
SB7 PC-RT9-SB7-SS21-22 11/12/92	RESULT		0.92	0.20	0.61	0.87	0.77	0.87	0.92	1.30	1.40	99.0	99.0	1.10	1.10	0.97	0.87	1.40	1.10	-	1.10	0.77	0.92	-	0.92	99.0	0.92	2.70	1.10	0.82	0.92	2.90	2.60	4.80	0.82	0.82	2.70	
115-17	QUAL		n	æ	n	D	n	ם	Ω	ם	D	n	D	n	D	Ω	n	Ω	D	D	n	n	ם	ם	n	ב	D	n	m	Ω	n	D	ם	-	ם	n	n	
SB7 PC-RT9-SB7-SS15-17 11/12/92	RESULT		0.94	0.10	0.63	0.89	0.78	68.0	0.94	1.40	1.50	0.68	0.68	1.10	1.10	0.99	0.89	1.50	1.10	-	1.10	0.78	0.94	-	0.94	0.68	0.94	2.70	1.10	0.83	0.94	2.90	2.60	9.30	0.83	0.83	2.70	
05-07	UAL		'n	æ	ñ	5	ñ	5	ñ	5	5	5	5	5	5	5	5	G	Ē	5	5	5	5	5	5	n	5	5	æ	5	5	ħ	5	M	ħ	5	5	
SB7 PC-RT9-SB7-SS05-07 11/12/92	RESULT Q		0.94	0.17	0.63	0.89	0.78	0.89	0.94	1.40	1.50	89.0	89.0	1.10	1.10	0.99	0.89	1.50	1.10	-	1.10	0.78	0.94	-	0.94	89.0	0.94	2.70	0.72	0.83	0.94	2.90	2.60	2.20	0.83	0.83	2.70	
LOCATOR: SAMPLE ID: F COLLECTION DATE:	UNITS:		ng/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ng/kg	ug/kg	ug/kg	ng/kg	ay/gn	ng/kg	ng/kg	ug/kg	ug/kg	ng/kg	. ug/kg	ng/kg	ug/kg	ng/kg	ng/kg	ug/kg	ug/kg	
COLLEC		8010	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethylene	1,2,3-Trichloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,2-trans-Dichloroethylene	_	1,3-cis-Dichloropropylene		1,4-Dichlorobenzene	2-Chloroethylvinyl ether	2-Chlorotoluene	4-Chlorotoluene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Dibromochloromethane	Dibromomethane	Methyl bromide	Methyl chloride	Methylene chloride	Tetrachloroethylene	Trichloroethylene	Vinyl chloride	

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

\$10-12	QUAL	n	D	ם	;	Þ		:	<b>&gt;</b> ;	<b>&gt;</b> :	<b>)</b>	ω;	<b>)</b>	Þ	Ω	n	D	Þ	D	n	ם	D	Þ	5	Þ	ם	<b>&gt;</b>	ב	ם	ח	Þ	Ω	ם	ā		
SB10 PC-RT9-SB10-SS10-12 11/12/92	RESULT	1.40	1.20	1.90		3.30	1.90		0 <del>4</del> .1	1.90	1.90	5.20	1.50	5.50	340	340	340	340	340	820	340	340	340	820	340	340	340	340	820	340	340	820	340	340		
	QUAL		Þ	ם		Þ	ם	:	<b>)</b>	<b>&gt;</b>	<b>)</b>	<b>)</b>	ם	ם	D	ב	Þ	ב	Ω	n	ם	n	5	5	ם	ר	ם	₽	ר	n	ם	Þ	ם	ב		
SB9 PC-RT9-SB9-SS15-17 11/12/92	RESULT	2.10	1.40	2.10		3.70	2.10		1.60	2.10	2.10	13	1.70	6.20	380	380	380	380	380	930	380	380	380	930	380	380	380	380	930	380	380	930	380	380		
115-17	QUAL	m	D	B		ם	Δ	;	<b>&gt;</b> 1	Þ	æ	D	<u>m</u>	B	D	1	ם	ם	o D	o ב	D	D	D	D	D	n	ח	D	n	ם	n	5	n	Þ		
SB8 PC-RT9-SB8-SS15-17 11/12/92	RESULT	0.11	1.30	0.08	•	3.30	0.77		1.50	1.90	0.10	=	0.0	0.64	340	340	340	340	340	830	340	340	340	830	340	340	340	340	830	340	340	830	340	340		
321-22	QUAL	pt	כו	В		ב	æ		כ		æ	D	D	Ø	Ω	=	<b>=</b>	=	) D	ם מ	כי	ר	n	D	D	ם	D	n	ם	D	n	D	D	n		
SB7 PC-RT9-SB7-SS21-22 11/12/92	RESULT	0.14	1.20	0.28	,	3.30	0.20	•	1.40	1.60	0.38	11	1.50	0.56	340	340	340	340	340	820	340	340	340	820	340	340	340	340	820	340	340	820	340	340		
315-17	QUAL	æ	ם	B			æ		Þ	כ	В	Ω	B	<b>£</b>	=	=	<b>=</b>	=	=	) <b>=</b>	) )	Þ	Ω	D	n	n	Þ	n	n	Þ	n	5	ם	D		
SB7 PC-RT9-SB7-SS15-17 11/12/92	RESULT	0 10	1.30	90.0	•	•	0.55	•	1.50	1.90	0.22		0.07	99.0	340	340	340	340	340	830	340	340	340	830	340	340	340	340	830	340	340	830	340	340		
205-07	QUAL	æ	2 0	В		Ω	n		-		D	n	n	В	=	=	<b>=</b>	> =	<b>=</b>	=	) <b>=</b>	o ח	ס	ר	n	D	Ω	n	n	Ω	n	'n	D	D		
SB7 PC-RT9-SB7-SS05-07 11/12/92	RESULT	Š	1.30	0.49	•	3.30	1.90	•	1.50	1.90	1.90	11	1.60	0.43	340	340	340	340	340	830	340	340	340	830	340	340	340	340	830	340	340	830	340	340		
LOCATOR: SAMPLE ID: 1 COLLECTION DATE:	UNITS:	2.1V.	ug/kg ng/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	<i>1</i> /4/200	3	ug/kg e <sub>4</sub> /e	45/45	gy/gn		10/kg	119/169	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ay/an	ug/kg	ug/kg		
COLLE		8020	1,2-Dimethylbenzene	1.3-Dichlorobenzene	1,3-Dimethylbenzene	1,3/1,4-Dimethylbenzene	1,4-Dichlorobenzene	1,4-Dimethylbenzene	Benzene	Chlorobenzene	Ethylbenzene	Methyl-t-Butyl Ether	Styrene	Toluene	CLP 3/90	1,2,4-111000000000000	1,2-Dichlorobenzene	1,3-Diciliologenzene	I,4-Dichlorobenzene	2,2 -Oxybis(1-Cillotopiopalie	2,4,2-1 Hemotophenol	2.4.Dichloronhand	2.4-Dimethylphenol	2.4-Dinitrophenol	2.4-Dinitrotoluene	2.6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methyl-4, 6-Dinitrophenol	2-Methylpanhihalene	2-Methylphenol	2-Nitrosniline	2-Nitrophenol	3.3'-Dichlorobenzidine		

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

and "balling and a second of the company of the com	TOR: SB7 SB9 SB10  E. ID: PC-RT9-SB7-SS15-17 PC-RT9-SB7-SS21-22 PC-RT9-SB8-SS15-17 PC-RT9-SB9-SS15-17 PC-RT9-SB10-SS10-12  ATE: 11/12/92 11/12/92 11/12/92 11/12/92	NITS: RESULT QUAL RESULT QUAL RESULT QUAL RESULT QUAL RESULT QUAL	UZVIKE 830 U 830 U 820 U 830 U 930 U 820	340 U 340 U 340 U 340 U 380 U	340 U 340 U 340 U 340 U 380 U	340 U 340 U 340 UJ 340 U 380 UJ	340 U 340 U 340 U 340 U 380 U	340 U 340 U 340 U 340 U 380 U	830 U 830 U 820 U 830 U 930 U	830 UJ 830 UJ 820 UJ 830 UJ	340 U 340 U 340 U 340 U 380 U	340 U 340 U 340 U 340 U 380 U	340 U 340 U 340 U 340 U 380 U	340 U 340 U 340 U 340 U 380 U	340 U 340 U 340 U 340 U 380 U	340 U 340 U 340 UJ 340 U 380 U	340 U 340 U 340 U 340 U 380 U	340 U 340 U 340 U 340 U 380 U	340 UJ 340 UJ 340 UJ 340 UJ 380 UJ	340 U 340 U 340 U 340 U 380 U	340 U 340 U 340 U 340 U 380 U	190 B 320 B 240 B 230 BJ 210 B	340 UJ 340 UJ 340 UJ 340 UJ 380 UJ	340 U 340 U 340 U 340 U 380 U	340 U 340 U 340 U 340 U 380 U	340 U 340 U 340 U 340 U 380 U	340 U 340 U 340 U 340 U 380 U	340 U 340 U 340 U 340 U 380 U	340 U 340 U 340 U 340 U 380 U	340 U 340 U 340 U 340 U 380 U	340 U 340 U 340 U 340 U 380 U	340 U 340 U 340 U 340 U 380 U	340 U 340 U 340 U 340 U 380 U	340 U 340 U 340 U 340 U 380 U	340 U 340 U 340 U 340 U 380 U	340 UJ	
		RESULT																																			2.40

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

COLLEC	LOCATOR: SAMPLE ID: COLLECTION DATE:	SB7 PC-RT9-SB7-SS0 11/12/92	105-07	SB7 PC-RT9-SB7-SS15-17 11/12/92	15-17	SB7 PC-RT9-SB7-SS21-22 11/12/92	:S21-22 2	SB8 PC-RT9-SB8-SS15-17 11/12/92	115-17	SB9 PC-RT9-SB9-SS15-17 11/12/92	SS15-17 2	SB10 PC-RT9-SB10-SS10-12 11/12/92	SS10-12 2	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	
		340	=	340	ח	340	ם	340	n	380	ם	340	D	
Nitrobenzene	30 } 4	240	=	830	=	820	n	830	n	930	ם	820	5	
Pentachiorophenol	ng/kg	930	=	340	=	340	ם	340	D	380	Þ	340	Þ	
Phenanthrene	ug/kg	340	=	340	=	340	· =	340	ם	380	ם	340	Þ	
Phenol	Ug/Kg	340	<b>&gt;</b> =	340	=	340	ם מ	340	n	380	ם	340	D	
Pyrone .	ug/kg	340	<b>=</b>	340	=	340	ם ס	340	n	380	n	340	Þ	
bis(2-Chloroethoxy)methane	ug/kg ug/kg	340	=	340	כס	340	כי	340	Ω	380	D	340	D	
bis(2-Chioroemyi) eurer bis(2-Ethylhexyl)phthalate	ug/kg ug/kg	340	5	340	5	340	Ω	340	'n	130	•	340	Þ	
METALS		000	-	000	-	821	-	639	-	1040	_	894		
Aluminum	mg/kg ,''	1900	ר ב	670	• =	170	· =	5.90	n	6.70		5.9		
Antimony	mg/kg		6	6	<b>A</b>	0.65		0.66	BO	0.5		0.67		
Arsenic	mg/kg		2 2	2.80		2 80		2.30	BO G	3.7		2.7		
Barium	mg/kg		2	0.21	2 =	0.20	2 0	0.21	ב	0.23	) D	0.21	D [	
Beryllium	mg/kg		<b>=</b>	17:0		0.51		0.52	ם	0.58		0.5		
Cadmum	IIIB/KB	Ą	8	20000		34200		28800		35700		30200	-	
Calcium	mg/kg mg/kg		3	2.90		2.20	_	1.80		2.8		1.80		
Chromium Cassosiant	l'em		ם	0.01	ם	0.0		0.01	D	0.0		0.0		_
Chromann, nexavarent	e		BO	1.20	Ω	1.10		1.10	D	1.3	n o	T.	) 0	_
Cobair	94/9m	2 60	2	2.60	ח	2.6(		2.60	n	2.9		2.6		_
Copper	mg/kg	72	)	1550		1490		1220		1870		1550	,	
	o de			0.87		0.78	•	19.0		-		8.0	<b>69</b>	
Magnesium	mg/kg	œ		4010		4690		4230		6250		4020		
Mangapese	mg/kg			42.60		40.10	0	33.90		47.5		40.1		
Mercury	mg/kg		N	0.10	_	0.10	_	0.10	S	0.1	>		20	
Nickel	mg/kg		Ω	4.20		4.1		4.20		4.		4 5		
Potassium	mg/kg	Š		808	D	496	D	206		267	<b>&gt;</b> :	203	o :	
Selemina	mg/kg		ח	0.42		0.4		0.42	)	0.4		· ·		٠.
Silve	mg/kg	-		-		-				1.2				¬ ′
	me/kg	95.20		113		105		105		138			•	_
Tellim	mg/kg		ù,	0.21	OL.	0.20	_	0.21	αΓ	0.23	3 OL		10 OF	، د
Vanadium	me/ke			3.30		3.40	0 30	2.50		4				<b>~</b> '
Zinc	mø/ke		æ	3.60		3.40	0 B	3.40		3.5				20
	Ò	<b>1</b>												
TPH						•		19.50		01.51	_	19.40	ç	
Total Petroleum Hydrocarbons	ns mg/kg	21.40		18.30		13.00	2	DC:01	_		2		<b>!</b>	

## Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

SB12	4 PC-RT9-SB12-SS05-07	11/13/92
SB11	SAMPLE ID: PC-RT9-SB11-SS12-14	11/12/92
LOCATOR:	SAMPLE ID:	COLLECTION DATE:

UNITS: RESULT QUAL RESULT QUAL

	1				•	1	1	•	,	•		ı	•	•	•	•		•		ı		•	٠	•	•	1	Ū	•	•		•		•	•	•
	Ω	Þ	Ω	D	n	Ω	Ω	n	D	Ω	Ω	D	Ω	Ω	D	D	n	ם	D	n	n	Ω	Ω	Ω	D	Ω	B	ח	ב	Þ	D	В	D	D	D
	0.92	2.80	0.61	0.87	0.77	0.87	0.92	1.30	1.40	99.0	99.0	1.10	1.10	0.97	0.87	1.40	1.10	_	1.10	0.77	0.92	-	0.92	99.0	0.92	2.70	0.84	0.82	0.92	2.90	2.60	5.30	0.82	0.82	2.70
	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ng/kg	ug/kg	ng/kg	ug/kg	ug/kg	ng/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ng/kg	ug/kg	ng/kg
8010	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethylene	1,2,3-Trichloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,2-trans-Dichloroethylene	1,3-Dichlorobenzene	1,3-cis-Dichloropropylene	1,3-trans-Dichloropropylene	1,4-Dichlorobenzene	2-Chloroethylvinyl ether	2-Chlorotoluene	4-Chlorotoluene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Dibromochloromethane	Dibromomethane	Methyl bromide	Methyl chloride	Methylene chloride	Tetrachloroethylene	Trichloroethylene	Vinyl chloride
														- 1	;	72																			

# Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena, MI

SS05-07	QUAL															כ	Ω	ם	· =	> <b>:</b>	o <b>:</b>	o =	o :	<b>)</b> :	<b>&gt;</b> =	<b>-</b>	) <b>:</b>	o =	<b>&gt;</b> :	<b>)</b> ;	<b>)</b>	Þ	n	D	D	n		
SB12 PC-RT9-SB12-SS05-07 11/13/92	RESULT		•	•	•	•	•	1	•	•	•	•	•	•	•	340	340	340	340	340	0.50	830	340	340	340	830	340	340	340	340	830	340	340	830	340	340		
	QUAL		ם	Ω	B		Ω	ב		ח	ח	Þ		Þ	m	=	=	=	) <b>:</b>	) <b>:</b>	<b>&gt;</b> ;	o :	<b>-</b> ;	<b>)</b>	3:	<b>:</b>	<b>-</b>	<b>:</b>	<b>)</b> ;	<b>-</b>	כ	Þ	D	Ω	n	Ω		
SB11 PC-RT9-SB11-SS12-14 11/12/92	RESULT		1.40	1.20	0.50	4	3.30	1.80	ı	1.40	1.80	1.80	0.54	1.50	0.41	340	340	340	340	340	340	820	340	340	340	820	340		•			340	340	820	340	340		
LOCATOR: SAMPLE ID: P COLLECTION DATE:	UNITS:		ng/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	24/ 200	28/18 1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	ug/kg	ug/kg			ug/kg	ng/kg	ng/kg	ug/kg	ug/kg	ug/kg	ug/kg	ng/kg	ug/kg	ug/kg	ug/kg	gy/gu	ug/kg	ug/kg	ug/kg	1	
COLLEC	y <sup>n</sup> .	8020	1.2-Dichlorobenzene	1.2-Dimethylbenzene	1.3-Dichlorobenzene	1 3-Dimethylbenzene	1.3/1.4-Dimethylbenzene	1.4-Dichlorobenzene	1,4-Dimethylbenzene	Benzene	Chlorobenzene	Fihylhenzene	Methyl-t-Butyl Ether	Styrene	Toluene	CLP 3/90	1,2,4-1 nchlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2,2'-Oxybis(1-Chloropropane)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methyl-4,6-Dinitrophenol	2-Methylnaphthalene	2-Methylphenol	2. Nitrospiline	2-Nitrophenol	3.32Dichlorohenzidine	<b>.</b>	

-SS05-07 92	QUAL	n	n	n	ם	Ω	Ω	D	Ω	Ω	Ω	Ω	Ω	n	n	Ω	Ω	n	D	D	8	Ω	ב	D	D	n	D	Ω	Ω	n	Ω	Ω	n	Ω	n	Ω	n	
SB12 PC-RT9-SB12-SS05-07 11/13/92	RESULT	830	340	340	340	340	340	830	830	340	340	340	340	340	340	340	340	340	340	340	55	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	
-SS12-14 92	QUAL	n	Ω	Ω	n	D	n	n	'n	D	D	Ω	D	D	n	n	D	ħ	n	D	Ω.	5	Ω	n	Ω	Ω	Ω	Ω	n	Ω	Ω	n	Ω	ם	n	n	ם	
SB11 PC-RT9-SB11-SS12-14 11/12/92	RESULT	820	340	340	340	340	340	820	820	340	340	340	340	340	340	340	340	340	340	340	52	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	
LOCATOR: SAMPLE ID: ) COLLECTION DATE:	UNITS:	ng/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ng/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	
COLLEC		3-Nitroaniline	4-Bromophenyl phenyl ether	4-Chloro-3-methyl phenol	4-Chloroaniline	4-Chlorophenyl phenyl ether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(ghi)perylene	Benzo(k)fluoranthene	Butyl benzyl phthalate	Carbazole	Chrysene	Di-n-butyl phthalate	Di-n-octyl phthalate	Dibenzo(a,h)anthracene	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3~c,d)pyrene	Isophorone	N-Nitrosodi-N-Propylamine	N-Nitrosodiphenylamine	Naphthalene	
																	ı	Ω	1																			

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

0.20		mg/kg 102 B0 -	1	0.41	OI:+ '		35.40	35	mg/kg 0.85 1.30			- 1.10 U -		mg/kg 20000 3 4.20		U 0.21	ВО -	0.45	5.80 U 5.90 U	mg/kg 725 J -	ug/kg 33 J	ug/kg 3	ug/kg 340 U 340	ug/kg 340 U 340 U	340 U 340	ug/kg 340 U 340	ug/kg 820 U 830	ug/kg 340 U 340 U	UNITS: RESULT QUAL RESULT QUAL
	Thallium	Sodium	Silver	Polassium Selenium	Nickel	Mercuty	Manganese	Magnesium	Lead	Iron	Copper	Cobalt	Chromium, Hexavalent	Calcium	Cadmium	Beryllium	Barium	Arsenic	Antimony	METALS Aluminum	bis(2-Ethylhexy1)phthalate	bis(2-Chloroethyl) ether	bis(2-Chloroethoxy)methane	Pyrene	Phenol	Phenanthrene	Pentachlorophenol		Nitrobenzene

Appendix L - Sediment Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

Appendix L - Sediment Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

3	QUAL		<u>m</u>	Þ					ם						Ω	D	D	ם	D	n	Ω	D	ב	Þ	D	O	ם	כ	n	Þ	⊃	<b>&gt;</b>	Þ	Þ	Þ	Þ	
SD001 PC-TF4-SD001 07/29/93	RESULT		3.30	2.70	4	7.10	4	3.10	4	4	24	3.30	12		730	730	730	730	730	1800	730	730	730	1800	730	730	730	730	1800	730	730	1800	730	730	1800	730	
\$	QUAL		Þ	æ	D	n	В	n	Ω	n	ם	Þ	Д		ם	D	n	D	ר	n	D	D	Ω	n	n	D	D	<b>-</b>	Þ	Þ	D	Þ	D	D	Þ	D	
SD005 PC-P1-SD005 09/13/93	RESULT		1.80	0.12	2.30	4.20	0.25	1.80	2.30	2.30	14	1.90	0.12		430	430	430	430	430	1000	430	430	430	1000	430	430	430	430	1000	430	430	1000	430	430	1000	430	
83	QUAL		n	æ	D	n	ם	ם	ם	ם	D	D	8		Þ	Þ	D	Ω	D	Þ	D	n	D	D	D	D	ם	Þ	D	n	Þ	Þ	n	D	Þ	D	
SD003 PC-P1-SD003 09/13/93	RESULT		7	0.12	2.30	4.20	2.30	1.80	2.30	2.30	14	1.90	0.34		430	430	430	430	430	1000	430	430	430	1000	430	430	430	430	1000	430	430	1000	430	430	1000	430	
<b>4</b>	QUAL		ם	B	n	D	Ω	n	n	n	n	ח	æ		ם	D	D	ם	D	D	D	ם	D	Ω	D	n	D	n	ם	D	Ω	ם	ם	D	ם	Ω	
SD004 PC-P1-SD004 09/13/93	RESULT		1.70	0.12	2.20	4	0.23	1.70	2.20	2.20	14	1.90	0.14		410	410	410	410	410	066	410	410	410	066	410	410	410	410	066	410	410	066	410	410	066	410	
03	QUAL		Ω	n	n	D	D	D	ם	Ω	n	D	æ		D	Ω	n	n	n	D	D	n	D	ם	D	D	Þ	D	D	n	Þ	ם	D	n	ם	Ω	
SD002 PC-P1-SD002 09/13/93	RESULT		0.85	1.40	7	3.60	7	1.60	7	7	13	1.70	0.20		370	370	370	370	370	890	370	370	370	890	370	370	370	370	890	370	370	890	370	370	890	370	
01	QUAL		n	Ø	ם	D	Ø	n	D	Þ	D	ם	М		Ω	ם	Ω	n	n	Ω	ם	n	ם	n	D	D	D	Þ	D	Þ	Þ	n	n	D	n	n	
SD001 PC-P1-SD001 09/13/93	RESULT		1.80	0.20	2.30	4.10	0.27	1.80	2.30	2.30	14	1.90	0.24		420	420	420	420	420	1000	420	420	420	1000	420	420	420	420	1000	420	420	1000	420	420	1000	420	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg		us/ks	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ng/kg	ug/kg	ug/kg	ug/kg	
S, COLLECTI		2	1,2-Dichlorobenzene	1,2-Dimethylbenzene	1,3-Dichlorobenzene	1,3/1,4-Dimethylbenzene	1,4-Dichlorobenzene	Benzene	Chlorobenzene	Ethylbenzene	Methyl-t-Butyl Ether	Styrene	Toluene	71 b 3/g0	1 2 4-Trichlorobenzene	1.2-Dichlorohenzene	1.3-Dichlorobenzene	1.4-Dichlorobenzene	2,2'-Oxybis(1-Chloropropane)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methyl-4,6-Dinitrophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	4-Bromophenyl phenyl ether	

Appendix L - Sediment Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

Appendix L - Sediment Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

Particular   Par	LOCATOR: SAMPLE ID: COLLECTION DATE:	LOCATOR: SAMPLE ID: TION DATE:	SD001 PC-P1-SD001 09/13/93	3	SD002 PC-P1-SD002 09/13/93	3	SD004 PC-P1-SD004 09/13/93	4 2004 33	SD003 PC-P1-SD003 09/13/93	3 33	SD005 PC-P1-SD005 09/13/93	3 3	SD001 PC-TF4-SD001 07/29/93	3
wykg         420         U         430         U         430         U         730         U         730         U         430         U         430         U         730         U         730         U         730         U         730         U         430         U         430         U         730         U         730         U         430         U         430         U         730         U         730         U         430         U         430         U         730         U         730         U         730         U         430         U         430         U         730         U         730         U         730         U         430         U         430         U         730         U         730         U         430         U         4		UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
wights         450         0         450         0         450         0         730         1           wights         450         U         370         U         410         U         430         U         430         U         730         U         430         U			900	=	170	=	410	D	430	Þ	430	D	730	Ω
ug/kg         4.20         U         370         U         410         U         430         U <th< td=""><td>anthrene</td><td>ng/kg</td><td>774</td><td><b>)</b> :</td><td>0.0</td><td>) <b>:</b></td><td>017</td><td>=</td><td>430</td><td>=</td><td>430</td><td>ח</td><td>730</td><td>n</td></th<>	anthrene	ng/kg	774	<b>)</b> :	0.0	) <b>:</b>	017	=	430	=	430	ח	730	n
ug/kg         420         U         370         U         410         U         430         U         430         U         730         U         730         U         410         U         430         U         430         U         730         U         730         U         430         U         430         U         730         U         730         U         430         U         430         U         430         U         730         U	이	ug/kg	420	>	3/0	<b>)</b>	017	<b>:</b>	2	;	92	=	730	=
ug/kg         420         U         370         U         410         U         430         U	<u> 1</u>	ug/kg	420	ב	370	Þ	410	>	430	<b>-</b>	004	<b>)</b> ;	000	:
ug/kg         420         U         370         U         410         U         430         U         430         U         730         U         730           ug/kg         420         U         370         U         410         U         430         U         430         U         730	-Chloroethoxy)methane	nø/kø	420	D	370	ם	410	ם	430	כ	430	Þ	/30	<b>&gt;</b> '
ug/kg         5.70         UL         5.50         UL         5.80         UL         5.90         UL         7.80         UL         7.80         UL         5.90         UL         7.80         UL         7.80         UL         5.90         UL         5.90         UL         7.80         UL         7.80         UL         7.80         UL         5.90         UL         7.80         UL </td <td>Chlorosthall ather</td> <td>110/kg</td> <td>420</td> <td>Ω</td> <td>370</td> <td>Ω</td> <td>410</td> <td>D</td> <td>430</td> <td>D</td> <td>430</td> <td>ם</td> <td>730</td> <td><b>-</b></td>	Chlorosthall ather	110/kg	420	Ω	370	Ω	410	D	430	D	430	ם	730	<b>-</b>
magkg   5.70   UL   5.10   UL   5.50   UL   5.90   UL   7.80   U	bis(2-Ethylhexyl)phthalate	ug/kg	420	D	370	D	410	D	430	Þ	430	D	8	æ
Harmonia	0.11													
Marking   Mark	쥦.	, 1			•		•		•		•		•	
mg/kg         3.70         CL         8.50         3.10         6.96         0         3.40         2.30           mg/kg         3.70         0.51         U         0.62         U         0.62         U         0.52         U         0.57         U         0.67         U         0.	חוטתע	IIB/KK	· *				<b>* *</b>		8.		5.9		7.8	
Marke	топу	mg/kg			1.0		 		õ		4.6		2.3	0
Marke   Mark	Arsenic	mg/kg	'n		8.5		3.1	>					•	
mg/kg   0.51   U   0.45   U   0	Barium	mg/kg	1		•		• 6		, ,					
mg/kg	llium	mg/kg	0.51		0.4		4.0		0.0		90		1.0	
mg/kg         -         3.30         3.70         2.80         14.70         10           mg/kg         0.01         U         0.01         U <td>nium</td> <td>mg/kg</td> <td>0.64</td> <td></td> <td>0.5</td> <td></td> <td>9.0</td> <td></td> <td>0.0</td> <td></td> <td></td> <td></td> <td>25</td> <td></td>	nium	mg/kg	0.64		0.5		9.0		0.0				25	
major   majo	ium	mg/kg	•		•		1 (		' (		' ;		י בַּ	
mg/kg	mium	mg/kg	4		ж. Ж.		3.7		8.7		14.7		2	
mg/kg         2.30         0         4.30         L         2.30         L         4.30         L         4.50         L	omium, Hexavalent	l/gm	0.01		0.0		0.0		0.0		0.0		•	
mg/kg         2.30         0         4.30         6.30         L         1.30         L         4.50           mg/kg         2.30         L         3.90         L         2.30         L         4.50         L         4.50           rese         mg/kg         -<	##	mg/kg	•		•			9			· ?		. 4	
mg/kg	per	mg/kg	2.30		4.3	_	6.3	2	1.9		\$		ř	
mg/kg         2.30         L		mg/kg	,		•				, ,		٠ ٦	-	. 4	
mg/kg         - <td></td> <td>mg/kg</td> <td>2.3(</td> <td></td> <td>3.9</td> <td></td> <td>2.3</td> <td></td> <td>1.2</td> <td></td> <td>4</td> <td>٦</td> <td></td> <td></td>		mg/kg	2.3(		3.9		2.3		1.2		4	٦		
mg/kg         0.13         U         0.12         U         0.13         U         0.13         U         0.22           mg/kg         4.50         U         4.30         U         4.30         U         4.50         0         4.50         4.50           mg/kg         0.38         UL         0.34         UL         0.37         U         0.52         U         0.39         U         0.59           mg/kg         0.51         U         0.49         U         0.52         U         0.52         U         0.89           mg/kg         0.38         UL         0.34         UL         0.37         UL         0.39         U         0.52         U         0.89           mg/kg         0.38         UL         0.34         UL         0.37         UL         0.39         U         0.39         U         0.67           mg/kg         15.70         12.30         19.60         15.30         15.30         U         0.39         U         0.67           133         94.80         94.80         0         0.49         U         0.39         U         0.67	nesium	mg/kg	1		•		•		•					
mg/kg 0.13 U 0.11 U 0.12 U 0.13 U 0.15 U 0.1	ganese	mg/kg	•		•		' (		' 6					
mg/kg 4.50 U 4 U 4.30 U 4.00 0 111.70 7.30 mg/kg	cury	mg/kg	0.13		0.1		O		7.				7. 4	
mg/kg 0.38 UL 0.34 UL 0.37 U 0.39 U 0.39 U 1.10 mg/kg 0.51 U 0.45 U 0.49 U 0.52 U 0.52 U 0.89 mg/kg 0.31 UL 0.34 UL 0.37 UL 0.39 U 0.52 U 0.89 mg/kg 0.38 UL 0.34 UL 0.37 UL 0.39 U 0.39 U 0.67 mg/kg 15.70 12.30 19.60 15.30 15.30 30.30 13.80 mg/kg 43.90 85.30 41.10 13.3 94.80 6.30	le:	mg/kg	4.5(		4	Þ	4.		<b>4</b> .0		11./	>	}	
mg/kg 0.38 UL 0.34 UL 0.37 U 0.39 U 0.52 U 0.89 U 0.67 U 0.37 UL 0.39 U 0.89 U 0.67 U 0.67 U 0.89 U 0.89 U 0.67 U 0.89 U 0.89 U 0.67 U 0.89 U	ssium	mg/kg	•						. ?		٠ ,		· =	•
mg/kg 0.51 U 0.45 U 0.52 U 0.52 U 0.087 U 0.89 U 0.52 U 0.087 U 0.89 U 0.52 U 0.67 U 0.67 U 0.39 U 0.67 U 0	nium	mg/kg	0.38		0.3		0		0.3		2. O			
mg/kg - 0.38 UL 0.34 UL 0.37 UL 0.39 U 0.39 U 0.67  mg/kg	ů.	mg/kg	0.5	-	4.0		ò		0.5		0.5		~;	
n mg/kg 0.38 UL 0.34 UL 0.37 UL 0.39 U 0.39 U 0.00/ mg/kg	up.	mg/kg	•		•		•		•		• ;		٠ ٥	
n mg/kg - 15.70 12.30 19.60 15.30 13.80 13.80 roleum Hydrocarbons mg/kg 43.90 85.30 41.10 133 94.80 6.30	llium	mg/kg	0.3		0.3		) 0		0.3		0.3		Š	
mg/kg 15.70 12.30 19.60 15.30 30.30 13.80  Petroleum Hydrocarbonis mg/kg 43.90 85.30 41.10 133 94.80 6.30	adium	mg/kg	١		ŧ		•		•		' 3	•	· ;	
Petroleum Hydrocarbons         mg/kg         43.90         85.30         41.10         133         94.80         6.30		mg/kg	15.7	0	12.3	0	19.	90	15.3	<u>0</u>	 	2	13.6	
mg/kg 43.90 63.50					0		=	_	133		945	9	ý	
	il Petroleum Hydrocarbons	mg/kg	¥.54	<b>5</b>	6.00	>		2	3			·		

Appendix L - Sediment Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

SD004B PC-TF4-SD004B 07/30/93	RESULT QUAL		1.20	3.60 U	0.79 U	1.10 U	0.99 U	1.10 U	1.20 U	1.70 U	1.80 U	0.86 U	0.86 U	1.40 U	1.40 U	1.20 U	1.10 U	1.80 U	1.40 U	1.30 U	1.40 U	0.99 U	1.20 U	1.30 U	1.20 U	0.86 U	1.20 U	3.40 U	1.10 B	1.10 U	1.20 U	3.70 U	3.30 U	4	1.10 U	1.10 U	
	QUAL RES		n	Ω	Ω	ū	n	D	Þ	ū	D	Þ	Ω	Ω	Ω	D	Ω	D	n	D	Ω	Ω	Ω	D	Þ	Ω	ם	n	æ	n	D	ם	D		n	D	П
SD004A PC-TF4-SD004A 07/30/93	RESULT (		1.20	3.60	0.79	1.10	0.99	1.10	1.20	1.70	1.80	98.0	0.86	1.40	1.40	1.20	1.10	1.80	1.40	1.30	1.40	0.99	1.20	1.30	1.20	0.86	1.20	3.40	0.95	1.10	1.20	3.70	3.30	4.90	1.10	1.10	3.40
903	QUAL		ם	D	n	D	Ω	n	n	n	ם	Ω	Ω	ם	D	Ω	n	n	Ω	Þ	Þ	n	D	n	D	n	n	n	8	n	ם	Ω	D		n	ם	
SD003 PC-TF4-SD003 07/29/93	RESULT		1.20	3.60	0.81	1.10	-	1.10	1.20	1.80	1.90	0.88	0.88	1.50	1.50	1.30	1.10	1.90	1.50	1.40	1.50	-	1.20	1.40	1.20	0.88	1.20	3.50	-	1.10	1.20	3.80	3.40	12	1.10	1.10	3.50
	QUAL		D	ם	Ω	D	D	D	D	n	Ω	Þ	D	Ω	Ω	Þ	D	n	n	Ω	n	Þ	Ω	Ω	Ω	n	D	n	89	Þ	n	n	Þ		n		Ω
SD002B PC-TF4-SD002B 07/29/93	RESULT		1.30	3.90	0.87	1.20	1.10	1.20	1.30	1.90	7	0.94	0.94	1.60	1.60	1.40	1.20	7	1.60	1.40	1.60	1.10	1.30	1.40	1.30	0.94	1.30	3.80	0.98	1.20	1.30	4.10	3.60	5.60	1.20	1.20	3.80
02 <b>A</b>	QUAL		ΛΓ	M	n <b>r</b>	ΩΓ	ΩΓ	ď	Ωľ	Ę	Π	ΩΓ	'n	ď	ďΓ	Π	ΠΓ	ΩΓ	ΛΓ	ΩΓ	Π	Π	ΠΓ	'n	Π	ΩĽ	Π	ΝΓ	<b>2</b>	Ωľ	Π	ďΓ	UL O	1	ď	ď	nr.
SD002A PC-TF4-SD002A 07/29/93	RESULT		1.50	0.36	0.97	1.40	1.20	1.40	1.50	2.10	2.30	1	-	1.80	1.80	1.50	1.40	2.30	1.80	1.60	1.80	1.20	1.50	1.60	1.50	_	1.50	4.20	1.50	1.30	1.50	4.50	4	3	1.30	1.30	4.20
91 <b>A</b>	QUAL		Ω	ם	n	n	ם	ם	Ω	D	D	D	ם	D	D	n	ם	D	D	Þ	Þ	Ω	n	n	D	Ω	D	n	æ	n	Þ	D	D		Ω	D	D
SD001A PC-TF4-SD001A 07/29/93	RESULT		1.30	3.90	0.86	1.20	1.10	1.20	1.30	1.90	7	0.93	0.93	1.60	1.60	1.40	1.20	7	1.60	1.40	1.60	1.10	1.30	1.40	1.30	0.93	1.30	3.70	0.95	1.10	1.30	4	3.60	4.20	1.10	1.10	3.70
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ng/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ng/kg	ug/kg	ug/kg
COLLECT	€ :	8010	1,1,1,2-Tetrachloroethane	I,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	I, I-Dichloroethylene	1,2,3-Trichloropropane	1,2-Dibromoethane	I,2-Dichlorobenzene	1,2-Dichloroethane	,2-Dichloropropane	,2-trans-Dichloroethylene	i,3-Dichlorobenzene	1,3-cis-Dichloropropylene	,3-trans-Dichloropropylene	,4-Dichlorobenzene	2-Chloroethylvinyl ether	2-Chlorotoluene	4-Chlorotoluene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Dibromochloromethane	Dibromomethane	Methyl bromide	Methyl chloride	Methylene chloride	Tetrachloroethylene	Trichloroethylene	Vinyl chloride

Appendix L - Sediment Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

LOCATOR: SAMPLE ID: COLLECTION DATE:	OR: VIE:	SD001A PC-TF4-SD001A 07/29/93	<b>V</b> I	SD002A PC-TF4-SD002A 07/29/93	SD002B PC-TF4-SD002B 07/29/93	<b>B</b>	SD003 PC-TF4-SD003 07/29/93		SD004A PC-TF4-SD004A 07/30/93	ğ	SD004B PC-TF4-SD004B 07/30/93	æ
NA C	UNITS:	RESULT Q	QUAL	RESULT QUAL	RESULT	QUAL	RESULT QU	QUAL	RESULT QUAL		RESULT QU	QUAL
2   .2-Dichlombenzene	ue/ko	3	ם	2.30	) 2	D	1.20	<b>m</b>	1.80 U		1.80	D
	ug/kg	1.70	ם	1.90	1.70	ם	1.60	ם	1.60 U		1.60	ם
	ug/kg	2.60	Þ			n	2.40	ם	2.40 U		2.40	ם
1,3/1,4-Dimethylbenzene u	ug/kg	4.60	D			D	4.30	n			4.20	Þ
	ug/kg	2.60	D		U 2.60	Ω	2.40	Ω	2.40 U		2.40	D
Benzene	ug/kg	7	n			D	1.90	D			1.80	Þ
Chlorobenzene	ug/kg	2.60	D			D	2.40	Þ			2.40	D
Ethylbenzene	ug/kg	2.60	n			ם	2.40	Þ			2.40	ם
Methyl-t-Butyl Ether	ug/kg	16	D			D	15	Þ		_	4	D
Styrene	ug/kg	2.10	n			ם	7	Ω		_	7	ם
Tolucine	ug/kg	7.60	Ω		U 7.70	n	7.20	D		_	7	n
71 0 3 000												
blorohenzene	no/ko	470	=	230	1 470	=	044	1	430 U	_	430	D
	ug/kg	470	D	530	7 470	ם	440	ם	430 U	_	430	Þ
	ug/kg	470	Ω	530	J 470	ם	440	Ω	430 U	_	430	D
	ug/kg	470	D	530	J 470	n	440	n		_	430	n
2,2'-Oxybis(1-Chloropropane) u	ug/kg	470	כ	530		D	440	n			430	ב
	ug/kg	1100	Ω		u 1100	D	1100	D		_	1000	ם
lot	ug/kg	470	Ω		_	Þ	440	Ω		_	430	<b>&gt;</b>
	ug/kg	470	Þ			Þ	440	ם	430 U		430	<b>&gt;</b> :
o	ug/kg	470	: כ			D :	0 5	<b>D</b> :			430	<b>&gt;</b> :
	ug/kg	91	o :			<b>-</b> :	1100	<b>&gt;</b> :			996	<b>&gt;</b>
	ug/kg /t.a	0,4 0,5	<b>&gt;</b> =	530	0 470	<b>&gt;</b> =	044	<b>&gt;</b> =	430		430	<b>=</b>
2,0-Dillia Olougaine	ug/kg no/kg	074	) <b>=</b>		11 470	<b>)</b>	4 04	) <b>:</b>			430	<b>&gt;</b>
	ug/kg	470	Þ			ב	440	D	430 U	_	430	ח
initrophenol	ug/kg	1100	ם			ם	1100	D	1000 C	_	1000	D
	ug/kg	470	D			n	440	Ω		_	430	ם
	ug/kg	470	D			D	440	Þ	430 U	_	430	Þ
2-Nitroaniline u	ug/kg	1100	n			ם	1100	Þ		_	1000	n
	ug/kg	470	ם			n	<del>44</del> 0	D		_	430	ם
3,3'-Dichlorobenzidine u	ug/kg	470	D			n	044	Þ	430 C	_	430	Þ
3-Nitroamline u	ug/kg	1100	n			ם	1100	D		_	000	כ
4-Bromophenyl phenyl ether u	ug/kg	470	Ω			ם	440	D	430 L	_	430	Þ

Appendix L - Sediment Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

B x004B 13	QUAL	n	n	Ω	ם	D	D	n	D	ם	ם	ם	ם	ם	ם	Ω	Þ	Þ	ם	ם	n	D	Ω	D	Ω	D	Ω	ם	D	ם	Ω	D	ם	D	D	ם	Ω	
SD004B PC-TF4-SD004B 07/30/93	RESULT	430	430	430	430	1000	1000	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	1000	
3 3	QUAL	ם	ם	ם	D	ם	ם	ם	D	n	ם	D	D	Þ	Ω	D	Þ	ם	D	Þ	Þ	D	Þ	n	n	Ω	n	D	n	D	D	D.	D	Ω	D	Þ	D	
SD004A PC-TF4-SD004A 07/30/93	RESULT	430	430	430	430	1000	1000	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	1000	
5 D003 33	QUAL	D	ם	D	D	n	ם	ם	D	D	D	D	Ω	n	n	Ω	Ω	Ω	n	Ω	Ω	Ω	Ω	D	ם	D	D	D	n	ב	D	D	D	D	Þ	ם	ם	
SD003 PC-TF4-SD003 07/29/93	RESULT	440	440	440	440	1100	1100	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	1100	
3 002B 3	QUAL	Þ	ם	D	n	Ω	n	D	Ω	Ω	n	D	D	D	D	D	ם	D	D	Ω	Ω	Þ	n	Ω	Ω	Ω	n	D	n	D	Ω	D	D	Ω	ם	n	D	
SD002B PC-TF4-SD002B 07/29/93	RESULT	470	470	470	470	1100	1100	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	1100	
A 002A 3	QUAL	Ω	Þ	n	•	D	Ω	n	D	D	Þ	Ω	D	n	ם	n	Ω	Ω		D	Ω	Ω	n	n	n	n	Ω	ם	ם	n	n	Ω	ם	Þ	Þ	D	D	
SD002A PC-TF4-SD002A 07/29/93	RESULT	530	530	530	130	1300	1300	530	530	530	530	530	530	530	530	530	530	530	99	530	530	530	530	530	530	530	530	530	530	530	530	530	530	530	530	530	1300	
A 001A 3	QUAL	n	D	D	Þ	Ω	n	n	D	Ω	n	n	Ω	n	Ω	n	n	n	n	D	ם	n	n	n	'n	n	Ω	ם	ם	Ω	D	D	D	D	D	D	D	
SD001A PC-TF4-SD001A 07/29/93	RESULT	470	470	470	470	1100	1100	470	470	470	470	470	470	470	410	470	470	470	410	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	470	1100	
LOCATOR: SAMPLE ID: TION DATE:	UNITS:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ay/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ng/kg	ug/kg	ug/kg	
LOCATOR: SAMPLE ID: COLLECTION DATE:		4-Chloro-3-methyl phenol	4-Chloroaniline	4-Chlorophenyl phenyl ether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(ghi)perylene	Benzo(k)fluoranthene	Butyl benzyl phthalate	Carbazole	Chrysene	Di-n-butyl phthalate	Di-n-octyl phthalate	Dibenzo(a,h)anthracene	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-c,d)pyrene	Isophorone	N-Nitrosodi-N-Propylamine	N-Nitrosodiphenylamine	Naphthalene	Nitrobenzene	Pentachlorophenol	

Appendix L - Sediment Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

3 3 3	QUAL	ם	Þ	D	D	n	D			101				=		_			90		B			=			o ar			11		α -			O		
SD004B PC-TF4-SD004B 07/30/93	RESULT	430	430	430	430	430	430		•	4 60	1.10	· ·	0.13	040	ŕ	3 50	į	•	2.10		1.60		•	0 13	2.40	, i	0.40	0.53	;	0.40	;	0 10	•		6.30		
<b>4</b>	QUAL	Ω	Þ	D	ם	ם	ם			===	3 <	>	=	<b>:</b>	•				ă	3	œ	1		=	<b>&gt;</b> =	•	=	=	•	Ξ	•	£	9		Þ		
SD004A PC-TF4-SD004A 07/30/93	RESULT (	430	430	430	430	430	430			. 4	25.5	cc.o	. 0	6.0	60.0		3.10	•		7:10	6				0.13	7:7	0.00	62.0	cc.v	0 00	V.39	' :	14.70		6.30		
903	QUAL	D	D	Þ	D	n	8				3 0	>	=	<b>:</b>	5				g		¤	2			<b>&gt;</b>		E				>		<b>n</b>		ם		
SD903 PC-TF4-SD003 07/29/93	RESULT	440	440	44	440	440	110				08.4	0.78	' 6		0.41		4.60	•		OC.1	۰, ۳	n	•	' '	0.14	7.40	, ,	7.0	0.54		0.41	' (	)s./		6.30		
02 <b>B</b>	QUAL	Ω	n	n	n	D	Ω			:	Jo '	0	:	<b>&gt;</b> 1	0				į	90	2	2				>			<b>-</b>		T <sub>D</sub>		m		D		
SD002B PC-TF4-SD002B 07/29/93	RESULT	470	470	470	470	470	470			1 1	5.10	09.0		0.14	0.43	•	4	ı		1.80	' 6	0.90	•	•	0.14	2.60	•	0.45	0.58	•	0.43	•	5.90		6.30		
22 <b>A</b>	QUAL	Ω	· =	) <b>=</b>	=	) <b>=</b>	, <u>m</u>				d D	Ð		<b>D</b>	ם					08		ΣQ.				Þ			D		D		M		D		
SD002A PC-TF4-SD002A 07/29/93	RESULT	630	\$30	230	930 <b>5</b> 30	530	110			•	2.60	0.77	•	0.16	0.48	•	3.20	,		1.40		1.30	•	•	0.16	2.90		0.48	0.65	•	0.48	•	2.60		6.30		
91 <b>A</b>	QUAL	I	) <b>=</b>	<b>&gt;</b> =	<b>&gt;</b> =	<b>=</b>	, <b>m</b>	ì			ď	0		Þ	ר					0 <b>B</b>	i	<b>2</b>			D	D			ם		Þ		Ø		D		
SD001A PC-TF4-SD001A 07/29/93	RESULT (	027	÷ ;	? ;	0, <b>1</b>	4.4	£ 5	3		•	S	0.79	•	0.14	0.43	•	3.80	•	•	2.60	•	0.93	•		0.14	2.60	•	0.43	0.57	•	0.43	٠	4.80		6.30		
LOCATOR: SAMPLE ID: TION DATE:	UNITS:		an . San	ng/kg	ug/kg 	ug/kg	08/1/80 119/1/40	?		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	L/gm	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		mg/kg		
LOCATOR: SAMPLE ID: COLLECTION DATE:			Phenanthrene	Phenol	Pyrene	bis(2-Chloroethoxy)methane	bis(2-Chloroethyl) ether	DIS(Z-Eurymexy.)pinnarae	METALS	Aluminum	Antimony	Arsenic	Barium	Bervllium	Cadmium	Calcium	Chromium	Chromium, Hexavalent	Cobalt	Copper	lion	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	ndl	Total Petroleum Hydrocarbons		

Appendix L - Sediment Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

	¥L	n	м	Ω	n	n	Ω	n	ם	D	D	ם	Ω	n	n	D	n	ם	n	ח	ם	n	D	n	D	Þ	Þ	æ	n	n	n	Þ	æ	n	Ω	n	
6В SD106В //93	QUAL	.30	0.43	06.0	1.30	.10	.30	30	06:1	2.10	26	0.97	09	1.60	<del>6</del>	1.30	10	1.60	.50	99	.10	30	1.50	.30	0.97	.30	96.	66:	.20	.30	.20	3.70	90	.20	1.20	8.	
SD106B PC-TF4-SD106B 07/30/93	RESULT	-	ò	0	-	<b>-</b>		-	=======================================	.7	0	0		1.	-	-	.2		-	-	-	-	-	-	Ó	1	ei ei	Ó	-	1	4	6	3	_	1	e	
<b>6B</b>	QUAL	Þ	Þ	Þ	ם	ם	ם	ם	ם	D	D	D	D	D	n	D	D	D	ם	ם	ם	ם	ם	D	ם	D	D	В	D	D	Þ	n	M	D	ח	ם	
SD006B PC-TF4-SD006B 07/30/93		1.30	3.90	98.0	1.20	1.10	1.20	1.30	1.90	7	0.93	0.93	1.60	1.60	1.40	1.20	7	1.60	1.40	1.60	1.10	1.30	1.40	1.30	0.93	1.30	3.70	0.74	1.10	1.30	4	3.60	2.70	1.10	1.10	3.70	
PC-T	RESULT																																				
₹9	QUAL	n	Ø	D	n	n	D	Ω	ם	n	n	D	D	n	Þ	ם	Ω	Ω	ם	ם	n	D	D	D	D	Þ	ם	Ø	D	Þ	Þ	Þ	Ø	ם	-	n	
SD006A PC-TF4-SD006A 07/30/93		1.20	1.60	0.80	1.10	_	1.10	1.20	1.70	1.90	0.87	0.87	1.50	1.50	1.30	1.10	1.90	1.50	1.30	1.50	_	1.20	1.30	1.20	0.87	1.20	3.50	0.57	1.10	1.20	3.70	3.30	2.90	1.10	0.0	3.50	
S PC-TI	RESULT																																				
5 <b>B</b>	QUAL	D	Þ	Ω	D	n	n	n	n	ם	n	n	ם	Ω	n	n	ח	Ω	D	D	D	n	D	n	Ω	D	ם	B	ם	ב	Ω	n		D	ם	Þ	
SD005B PC-TF4-SD005B 07/30/93		1.30	3.80	0.85	1.20	1.10	1.20	1.30	1.80	7	0.92	0.92	1.50	1.50	1.30	1.20	7	1.50	1.40	1.50	1.10	1.30	1.40	1.30	0.92	1.30	3.70	0.95	1.10	1.30	3.90	3.50	16	1.10	1.10	3.70	
PC-T	RESULT																																				
5 <b>A</b>	QUAL	Ω	Ω	n	Ω	n	D	n	n	n	n	D	ם	ח	ח	ם	ם	n	D	n	n	D	D	D	Ω	n	D	89	n	D	ם	D	Ø	D	n	D	
SD005A PC-TF4-SD005A 07/30/93		1.70	5.20	1.20	1.60	1.40	1.60	1.70	2.50	2.70	1.20	1.20	2.10	2.10	1.80	1.60	2.70	2.10	1.90	2.10	1.40	1.70	1.90	1.70	1.20	1.70	2	1.10	1.50	1.70	5.40	4.80	18	1.50	1.50	2	
S PC-TJ 0	RESULT																																				
AB AB	QUAL	D	ב	D	n	Ω	ם	D	ם	n	D	ח	n	D	n	ם	Ω	D	ם	D	D	ם	D	ם	ם	D	ם	æ	D	D	ם	D	M	D	n	Ω	
SD104B PC-TF4-SD104B 07/30/93		1.20	3.60	0.81	1.10	_	1.10	1.20	1.80	1.90	0.88	0.88	1.50	1.50	1.30	1.10	1.90	1.50	1.40	1.50		1.20	1.40	1.20	0.88	1.20	3.50	1.10	1.10	1.20	3.80	3.40	3.30	1.10	1.10	3.50	
PC-T	RESULT																																				
LOCATOR: SAMPLE ID: TION DATE:	UNITS:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	
LOCATOR: SAMPLE ID: COLLECTION DATE:																																					
COLLE		thane	o	thane	ø.			126					nylene		ylene	opylene		ther				U	ine ine		ø				апе								
		achloroe	proethan	achloroe	oroethan	ethane	ethylene	oroprops	ethane	benzene	ethane	propane	chloroet	benzene	loroprop	chloropr	benzene	ylvinyl e	lene	iene	ne:	omethan	rometha		achlorid	ene.	v		orometh	thane	nide	ride	shloride	ethylene	ylene	ge Ge	
		8010 1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1, I-Dichloroethane	, 1-Dichloroethylene	1,2,3-Trichloropropane	,2-Dibromoethane	,2-Dichlorobenzene	1,2-Dichloroethane	,2-Dichloropropane	,2-trans-Dichloroethylene	1,3-Dichlorobenzene	1,3-cis-Dichloropropylene	1,3-trans-Dichloropropylene	1,4-Dichlorobenzene	2-Chloroethylvinyl ether	2-Chlorotoluene	4-Chlorotoluene	Bromobenzene	Bromochloromethane	<b>Bromodichloromethane</b>	Bromoform	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Dibromochloromethane	Dibromomethane	Methyl bromide	Methyl chloride	Methylene chloride	<b>Tetrachloroethylene</b>	Trichloroethylene	Vinyl chloride	
		801(	ij	=	Ë	<u>-</u> :	=	1,2,	7.7	1,2	1,2-		1,2	<u></u>	1,3	<u></u>	<b>-</b> ,	7-C	7. 7.	<u>4</u>	Bro	Bro	Bro	BR	ဋ	ਤ	ਹ	€	ā	눒	ž	ğ	ž	필	E	\$	

Appendix L - Sediment Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

SD106B PC-TF4-SD106B 07/30/93	T QUAL								2.70 U					<u> </u>				D 0	<b>Q</b> :	D :	D :			2 2						D 06		490 U	D 06	D 00	n 06	
SD PC-TF4 07//	RESULT													400	7	064	<b>74</b>	49	12	120	4		490													
.B 2006B 93	QUAL	:							<b>n</b> 0					Ξ	)	<b>:</b>	<b>&gt;</b> ;	⊃	Þ	ם	Þ	<b>&gt;</b> :	<b>&gt;</b> ;	<b>&gt;</b> :	<b>&gt;</b> =	ם כ	P	D	ם	ם	כ	ב	5	Þ	כ	
SD006B PC-TF4-SD006B 07/30/93	RESULT	•	7	1.7	2.6	4.6	2.6	7	2.60	5.6	16	2.1	7.6	470	2/4	£,0	0/4	470	470	1100	470	470	470	8 1 8	0,4	470	470	1100	470	470	1100	470	470	1100	470	
<b>490</b>	QUAL	;	<b>)</b> ;						D			n		=	<b>&gt;</b>	<b>&gt;</b> :	<b>-</b>	Þ	Þ	Þ	Þ	Þ	: כ	o :	<b>-</b> =	=	ם	Þ	Ω	Þ	D	Þ	Þ	ם	D	
SD006A PC-TF4-SD006A 07/30/93	RESULT	•	1.90	1.60	2.40	4.30	2.40	1.90	2.40	2.40	15	2	7.10	430	000	950	430	430	430	1100	430	430	430	1100	430	430	430	1100	430	430	1100	430	430	1100	430	
05B	QUAL	:	<b>)</b>	Þ	Þ	ם	Ω	n	ם	Þ	Ω	D	Þ	Ξ	o :	<b>&gt;</b> :	<b>D</b>	n	ם	ם	D	D	ם	<b>:</b>	o :	<b>=</b>	ם ס	כי	D	Þ	n	Ω	n	Ω	Ω	
SD005B PC-TF4-SD005B 07/30/93	RESULT	•	2	1.70	2.50	4.50	2.50	7	2.50	2.50	15	2.10	7.50	730	430	430	430	430	430	1100	430	430	430	1100	4.30	430	430	1100	430	430	1100	430	430	1100	430	
05A	QUAL	;	<b>)</b>	Þ	Þ	n	D	n	O	n	ם	ם	Ω	=	<b>&gt;</b> :	<b>&gt;</b> :	D	D	ם	n	Þ	D	ם	<b>)</b>	<b>&gt;</b> :	<b>&gt;</b> =	ם ס	Þ	n	n	Þ	Ω	n	Ω	Þ	
SD005A PC-TF4-SD005A 07/30/93	RESULT	į	2.70	2.30	3.50	6.20	3.50	2.70	3.50	3.50	21	2.90	10	063	030	630	630	630	630	1500	630	630	630	1500	630	630	630	1500	630	630	1500	630	630	1500	630	
04B	QUAL	1	Þ	Þ	n	D	D	D	D	D	Ω	n	D	:	<b>&gt;</b> ;	<b>)</b>	D	n	ם	ם	n	D	ם	: כ	<b>&gt;</b> :	<b>&gt;</b> =	) <b>=</b>	ם כ	D	D	Þ	Ω	D	D	D	
SD104B PC-TF4-SD1 07/30/93	RESULT	,	1.90	1.60	2.40	4.30	2.40	1.90	2.40	2.40	15	7	7.20	770	<del>1</del> .	440	440	440	440	1100	440	440	440	0011	0440	440	440	0011	440	440	1100	440	440	1100	440	
LOCATOR: SAMPLE ID: TION DATE:	UNITS:		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	**************************************	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	110/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	
LOCATOR: SAMPLE ID: COLLECTION DATE:		2	1,2-Dichlorobenzene	1,2-Dimethylbenzene	1,3-Dichlorobenzene	1,3/1,4-Dimethylbenzene	1,4-Dichlorobenzene	Benzene	Chlorobenzene	Ethylbenzene	Methyl-t-Butyl Ether	Styrene	Toluene	CLF 3/90	1,2,4-1 nchlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2,2'-Oxybis(1-Chloropropane)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,0-Dinifrotoluene	2.Chlorophanol	2-Methyl-4.6-Dinitrophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3.3Dichlorobenzidine	3-Nitroaniline	4-Bromophenyl phenyl ether	

Appendix L - Sediment Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

LOCATOR: SAMPLE ID: COLLECTION DATE:	LOCATOR: SAMPLE ID: TION DATE:	SD104B PC-TF4-SD104B 07/30/93	1B 0104B 93	SD005A PC-TF4-SD005A 07/30/93	4 005A 3	SD005B PC-TF4-SD005B 07/30/93	1B D005B 93	SD006A PC-TF4-SD006A 07/30/93	A 0006A 33	SD006B PC-TF4-SD006B 07/30/93	B 0006B 33	SD106B PC-TF4-SD106B 07/30/93	B 0106B 03
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloro-3-methyl phenol	ug/kg	44	D	630	n	430	D	430	Ω	470	Ω	490	D
4-Chloroaniline	ug/kg	440	D	630	n	430	n	430	D	470	n	490	Ω
4-Chlorophenyl phenyl ether	ng/kg	440	Ω	630	Ω	430	Ω	430	Ω	470	Þ	490	Ω
4-Methylphenol	ug/kg	440	Ω	630	Ω	430	Ω	430	n	470	Ω	54	-
4-Nitroaniline	ug/kg	1100	n	1500	Ω	1100	Ω	1100	D	1100	D	1200	D
4-Nitrophenol	ug/kg	1100	Ω	1500	D	1100	n	1100	D	1100	Ω	1200	D
Acenaphthene	ug/kg	440	n	630	Ω	430	D	430	Þ	470	n	490	Þ
Acenaphthylene	ug/kg	440	Ω	630	D	430	n	430	ם	470	D	490	D
Anthracene	ug/kg	440	ם	630	Ω	430	Ω	430	ם	470	D	490	ם
Benzo(a)anthracene	ug/kg	440	n	630	D	430	D.	430	Þ	470	D	490	Þ
Benzo(a)pyrene	ug/kg	440	Þ	630	D	430	D	430	ם	470	ם	490	ח
Benzo(b)fluoranthene	ug/kg	440	D	630	Þ	430	ם	430	ם	470	Þ	490	ם
Benzo(ghi)perylene	ug/kg	440	n	630	ם	430	D	430	ם	470	n	490	ם
Benzo(k)fluoranthene	ug/kg	440	Ω	630	D	430	Ω	430	Ω	470	Ω	490	D
Butyl benzyl phthalate	ug/kg	440	ם	630	Ω	430	n	430	ם	470	Þ	490	ם
Carbazole	ug/kg	440	ם	630	Ω	430	D	430	ם	470	Þ	490	Þ
Chrysene	ug/kg	440	Ω	630	Ω	430	D	430	n	470	Þ	490	n
Di-n-butyl phthalate	ug/kg	440	D	630	Ω	430	D	430	D	470	Þ	490	ם
Di-n-octyl phthalate	ug/kg	440	Ω	630	D	430	Þ	430	Þ	470	n	490	n
Dibenzo(a,h)anthracene	ug/kg	440	n	630	n	430	D	430	Þ	470	n	490	Þ
Dibenzofuran	ug/kg	440	Þ	630	ם	430	D :	430	י ב	470	<b>)</b>	490	ם :
Diethyl phthalate	ug/kg	440	n	630	<b>&gt;</b>	430	n	430	)	470	<b>&gt;</b>	490	D
Dimethyl phthalate	ng/kg	4 <del>4</del> 0	י ב	630	: כ	430	D:	430	<b>&gt;</b> :	470	<b>&gt;</b> :	490	<b>&gt;</b> :
Fluoranthene	ug/kg	440	D ;	630	<b>&gt;</b> ;	430	: כ	430	<b>)</b>	470	<b>&gt;</b> :	490	<b>)</b> ;
Fluorene	ug/kg "	0 440	o:	630	<b>&gt;</b> :	430	o :	430	<b>-</b> :	0,4	<b>)</b>	064	<b>-</b> :
Hexachlorobenzene	ug/Kg	044	<b>&gt;</b> :	930	<b>&gt;</b> :	430	<b>&gt;</b>	430	<b>&gt;</b> =	0,4	<b>&gt;</b>	490	<b>&gt;</b> =
TECACHIOCOURAGEILE	8 Y X	440	o <b>:</b>	630	o	430	) <b>:</b>	200		0/4		064	=
Translitor octobellianene	agy/gn	0 7	<b>:</b>	630	) <b>:</b>	430	<b>:</b>	430	) <b>:</b>	7	=	760	=
	gy/Kg	2 5	<b>:</b>	020	<b>:</b>	430	<b>:</b>	430	) <b>:</b>	2 6	<b>:</b>	400	) <b>:</b>
indeno(1,2,3-c,d)pyrene	ug/kg	0	<b>)</b> :	030	<b>)</b> ;	054	<b>)</b> ;	430	<b>:</b>	5,5	<b>;</b>	064	<b>:</b>
Isophorone	ug/kg	440	Þ	630	<b>)</b>	430	D :	430	י כ	0.4	<b>&gt;</b>	490	<b>)</b> ;
N-Nitrosodi-N-Propylamine	ug/kg	440	Þ	630	D	430	Þ	430	Þ	470		490	<b>)</b>
N-Nitrosodiphenylamine	ng/kg	440	Ω	630	Ω	430	Þ	430	ם	410	Þ	490	Þ
Naphthalene	ug/kg	440	n	630	Ω	430	D	430	ם	470	Þ	490	Ω
Nitrobenzene	ug/kg	440	n	630	n	430	n	430	ם	470	Þ	490	ב
Pentachlorophenol	ug/kg	1100	D	1500	Ω	1100	Ω	1100	Þ	1100	n	1200	ם

Appendix L - Sediment Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

LOCATOR: SAMPLE ID: COLLECTION DATE:	TOR: E ID: ATE:	SD104B PC-TF4-SD1 07/30/93	104B	SD005A PC-TF4-SD005A 07/30/93	) 005A 3	SD005B PC-TF4-SD005B 07/30/93	B 2005B 33	SD006A PC-TF4-SD006A 07/30/93	006A 3	SD006B PC-TF4-SD006B 07/30/93	B 006B 3	SD106B PC-TF4-SD106B 07/30/93	B 106B 13
Nn .	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Phenanthrene u	ug/kg	44	D	630	Þ	430	Ω	430	Þ	470	D	490	Þ
Phenol	ug/kg	440	ם	630	n	430	Ω	430	n	470	Þ	490	Þ
Pyrene	ug/kg	4	n	630	ם	430	ם	430	n	470	D	490	D
bis(2-Chloroethoxy)methane	ug/kg	440	n	630	n	430	Ω	430	D	470	n	490	Þ
bis(2-Chloroethyl) ether	ug/kg	440	n	630	ם	430	Ω	430	ם	470	Ω	490	D
bis(2-Ethylhexyl)phthalate	ug/kg	440	Ω	001	Ø	430	Ω	280	Ø	470	D	09	m
METAL S													
	mg/kg			1		i ,				٠ ،	;	•	
À	mg/kg	4.70	נ	6.70	כ	4.70	_	4.60	ij	<b>S</b>		5.20	
	mg/kg	0.85	0	1.20	0	0.54	D	1.70		0.53	Jn .	1.30	0
	mg/kg	•		•		•		•		•		1	
Beryllium n	mg/kg	0.13		0.19	Þ	0.13		0.13	D	0.14	D	0.15	D S
e	mg/kg	0.40	n	0.58		0.40	n (	0.40		0.43		0.45	
Calcium	mg/kg	,		•		•		•		•		•	
Сһготічт	mg/kg	3.80		6.30		4.10	0	4.10		3.60	_	4.20	_
Chromium, Hexavalent	mg/l	•		•		•				1		٠	
Cobalt	mg/kg	•		•	-	•		1		•		•	
er.	mg/kg	2.10	0 <b>B</b>	6.20	æ	1.40	0B	2.40	() <b>B</b>	1.90	(B)	1.90	0B
	mg/kg	•		•		•				•			
	mg/kg	1.40	m	8.10	Ω.	1.60	<b>B</b>	3.80	<b>m</b>	1.20	<b>m</b>	1.90	<b>B</b>
	mg/kg	1		•		,		1		,		ı	
02.	mg/kg	•		•		•		•		•		•	
A	mg/kg	0.13		0.19		0.13		0.13	ם	0.14	<b>D</b>	0.15	<b>-</b>
	mg/kg	2.60	0	3.50	D	2.40	D C	2.40		2.60		2.70	
	mg/kg	•		•		•		•		•		•	
Ē	mg/kg	0.40		0.72	_	0.40		0.40		0.43	<b>5</b>	0.45	<b>D</b>
	mg/kg	0.54	D	0.77	D	0.54	D .	0.53	n	0.57		09.0	
Sodium	mg/kg	•		•		•		1		•		•	
Thallium	mg/kg	0.40	ם	0.58	D	0.40	n 0	0.40	ם	0.43	D	0.45	2 OL
dium	mg/kg	•		•		•		1		•		•	
Zinc	mg/kg	8.50	щ	8.90	<b>m</b>	6.90	<b>B</b> 0	8.60	æ	10.50	<b>B</b>	8.30	<b>B</b>
												;	
Total Petroleum Hydrocarbons n	mg/kg	6.30	D	6.30	ם	6.30	D O	47.30	_	51.90	_	593	
						٢							

Appendix L - Sediment Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

Appendix L - Sediment Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

LOCATOR: SAMPLE ID: COLLECTION DATE:	LOCATOR: SAMPLE ID: TION DATE:	SD007 PC-TF4-SD007 07/31/93	71	SD008 PC-TF4-SD008 07/31/93	SD009A PC-TF4-SD009A 07/31/93	SD009B PC-TF4-SD009B 07/31/93	SD010A PC-TF4-SD010A 07/31/93	SD010B PC-TF4-SD010B 07/31/93	
	UNITS:	RESULT Q	QUAL	RESULT QUAL	RESULT QUAL	RESULT QUAL	RESULT QUAL	RESULT QUAL	Ä
2		•	1				:		:
1,2-Dichlorobenzene	ng/kg		20	2.80 B			- '		3 :
1,2-Dimethylbenzene	ng/kg	1.60	<b>&gt;</b>						5
1,3-Dichlorobenzene	ug/kg	2.40	D		U 06.1				5
1,3/1,4-Dimethylbenzene	ug/kg	4.30	ם						5
1,4-Dichlorobenzene	ug/kg	2.40	ם	2.40 U					B
Benzene	ug/kg	1.90	ם						5
Chlorobenzene	ug/kg	2.40	ם			2.30 U	2.80 UJ		5
Ethylbenzene	ug/kg	2.40	n						5
Methyl-t-Butyl Ether	ug/kg	15	ם	14 U					5
Styrene	ug/kg	2	D						5
Toluene	ug/kg	7.10	ם	7 U	5.50 UJ	0.70 U	8.20 UJ	0.08	_
	)								
CLP 3/90									
1.2.4-Trichlorobenzene	ug/kg	430	Þ	430 U	340 U	410 U	S00 U	340	ם
1,2-Dichlorobenzene	ug/kg	430	Þ	430 U	340 U	410 U	200 n	340	n
1.3-Dichlorobenzene	ug/kg	430	n	430 U	340 U	410 U	200 U	340	ם
1.4-Dichlorobenzene	ug/kg	430	D	430 U	340 U	410 U	200 n	340	ם
2,2'-Oxybis(1-Chloropropane)	ug/kg	430	D	430 U	340 U	410 U		340	Þ
2,4,5-Trichlorophenol	ug/kg	1100	Ω	1000 U		1000 U		820	Þ
2,4,6-Trichlorophenol	ug/kg	430	ם	430 U	340 U			340	Þ
2,4-Dichlorophenol	ug/kg	430	D	430 U	340 U		200 A	340	ם
2,4-Dimethylphenol	ug/kg	430	Ω	430 U		410 U		340	ב
2,4-Dinitrophenol	ug/kg	1100	n	1000 U				820	Þ
2,4-Dinitrotoluene	ug/kg	430	D		340		200 n	340	ם
2,6-Dinitrotoluene	ug/kg	430	n	430 U				340	Þ
2-Chloronaphthalene	ug/kg	430	ם	430 U				340	Þ
2-Chlorophenol	ug/kg	430	Þ		340			340	ב
2-Methyl-4,6-Dinitrophenol	ug/kg	1100	n					820	Þ
2-Methylnaphthalene	ug/kg	430	n		340			340	Þ
2-Methylphenol	ug/kg	430	n	430 U				340	Þ
2-Nitroaniline	ug/kg	1100	n		820			820	Þ
2-Nitrophenol	ug/kg	430	ח		340			340	ם
3.3'-Dichlorobenzidine	ug/kg	430	D		340			340	ם
3-Nitroaniline	ug/kg	1100	D	1000 U	820 U			820	ם
4-Bromophenyl phenyl ether	ug/kg	430	D		340			340	ם
	, 1								

Appendix L - Sediment Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

COLLECT	SAMPLE ID: COLLECTION DATE:	PC-TF4-SD0 07/31/93	3007 93	PC-TF4-SD008 07/31/93	33 93	PC-TF4-SD009A 07/31/93	D009A 93	PC-TF4-SD009B 07/31/93	D009B '93	PC-TF4-SD010A 07/31/93	IF4-SD010A 07/31/93	PC-TF4-SD010B 07/31/93	TF4-SD010B 07/31/93
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloro-3-methyl phenol	ug/kg	430	n	430	Ω	340	Ω	410	Ω	200	n	340	D
•	ug/kg	430	n	430	n	340	Ω	410	Þ	200	D	340	n
4-Chlorophenyl phenyl ether	ug/kg	430	Ω	430	Ω	340	Ω	410	n	200	D	340	Ω
	ug/kg	430	D	430	Ω	340	n	410	Ω	200	Þ	340	Ω
	ug/kg	1100	ם	1000	n	820	D	1000	D	1200	Þ	820	n
	ug/kg	1100	D	1000	D	820	n	1000	n	1200	D	820	ם
	ug/kg	430	Þ	430	Ω	340	Ω	410	Ω	200	D	340	Ω
	ug/kg	430	D	430	D	340	Ω	410	Ω	200	n	340	Ω
	ug/kg	430	Ω	430	ם	340	n	410	Ω	200	n	340	n
Benzo(a)anthracene	ug/kg	430	D	430	n	340	ם	410	n	200	D	340	Ω
	ug/kg	430	n	430	ם	340	D	410	Þ	200	Þ	340	D
Benzo(b)fluoranthene	ug/kg	430	D	430	D	340	ם	410	ם	200	n	340	Ω
Benzo(ghi)perylene	ug/kg	430	ב	430	D	340	D	410	ם	200	ם	340	Ω
Benzo(k) fluoranthene	ug/kg	430	Ω	430	n	340	Ω	410	ם	200	n	340	n
Butyl benzyl phthalate	ug/kg	430	D	430	D	340	D	410	ם	200	D	340	Ω
	ug/kg	430	Ω	430	Ω	340	n	410	ם	200	n	340	Ω
	ug/kg	430	Þ	430	D	340	ם	410	Ω	200	Þ	340	n
Di-n-butyl phthalate	ug/kg	430	ם	430	D	340	ם	410	ם	200	ם	340	ם
Di-n-octyl phthalate	ug/kg	430	D	430	D	340	ם	410	ם	200	D	340	D
Dibenzo(a,h)anthracene	ug/kg	430	ם	430	Ω	340	ם	410	Þ	200	Ω	340	n
	ug/kg	430	Ω	430	n	340	Ω	410	מ	200	D	340	D
Diethyl phthalate	ug/kg	430	ב	430	D	340	D	410	D	200	Þ	340	D
Dimethyl phthalate	ug/kg	430	D	430	n	340	Ω	410	D	200	D	340	n
	ug/kg	430	D	430	n	340	Ω	410	Ω	200	Ω	340	Ω
	ug/kg	430	Ω	430	Ω	340	Ω	410	ם	200	ם	340	<b>D</b>
Hexachlorobenzene	ug/kg	430	Ω	430	Ω	340	Ω	410	D	200	Ω	340	D
Hexachlorobutadiene	ug/kg	430	Ω	430	Ω	340	n	410	Ω	200	D	340	Ω
Hexachlorocyclopentadiene	ug/kg	430	Ω	430	n	340	n	410	n	200	ב	340	Ω
Hexachloroethane	ug/kg	430	n	430	n	340	Ω	410	D	200	n	340	Ω
Indeno(1,2,3-c,d)pyrene	ug/kg	430	Þ	430	n	340	ם	410	n	200	כ	340	Ω
	ug/kg	430	Ω	430	Ω	340	D	410	D	200	n	340	O
N-Nitrosodi-N-Propylamine	ug/kg	430	ם	430	Þ	340	Ω	410	n	200	ם	340	n
N-Nitrosodiphenylamine	ug/kg	430	ם	430	ם	340	ם	410	n	200	n	340	D
	ay/gu	430	n	430	ם	340	D	410	ב	200	D	340	n
	ug/kg	430	n	430	D	340	n	410	ם	200	D	340	D
Pentachlommhenol	ne/ke	1100	ם	1000	D	820	D	1000	D	1200	n	820	ם

Appendix L - Sediment Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

430         U         430         U         440         U         500         U         340           430         U         430         U         430         U         440         U         500         U         340           430         U         430         U         430         U         440         U         500         U         340           430         U         430         U         430         U         440         U         500         U         340           430         U         430         U         440         U         500         U         340         U         440         U         500         U         340           450         U         430         U         420         U         440         U         500         U         410           450         U         430         U         420         U         440         U         540         U         410           6.33         U         430         U         430         U         430         U         430         U         430           1.34         U         1.30 <th< th=""><th>430         U         430         U         410         U         500         U           430         U         430         U         340         U         410         U         500         U           430         U         430         U         340         U         410         U         500         U           430         U         430         U         340         U         410         U         500         U           430         U         430         U         440         U         500         U           430         U         430         U         440         U         500         U           430         U         430         U         440         U         500         U           450         U         450         U         460         U         540         U         440         U           53         U         639         U         630         U         440         U         540         U           639         U         630         U         630         U         630         U         440           639</th><th>LOCATOR: SAMPLE ID: COLLECTION DATE:</th><th>SD007 PC-TF4-SD007 07/31/93</th><th>7 1D007 93 011A1.</th><th>SD008 PC-TF4-SD008 07/31/93 PESHIT OH</th><th>3 D008 33 OUAL</th><th>SD009A PC-TF4-SD009A 07/31/93 RESULT OU</th><th>A 2009A 93 OHAL</th><th>SD009B PC-TF4-SD009B 07/31/93 RESULT OU</th><th>93 OUTAL</th><th>SD010A PC-TF4-SD010A 07/31/93</th><th>04 0010A 93 011AL</th><th>SD010B PC-TF4-SD010B 07/31/93 RESULT OUA</th><th>0010B</th></th<>	430         U         430         U         410         U         500         U           430         U         430         U         340         U         410         U         500         U           430         U         430         U         340         U         410         U         500         U           430         U         430         U         340         U         410         U         500         U           430         U         430         U         440         U         500         U           430         U         430         U         440         U         500         U           430         U         430         U         440         U         500         U           450         U         450         U         460         U         540         U         440         U           53         U         639         U         630         U         440         U         540         U           639         U         630         U         630         U         630         U         440           639	LOCATOR: SAMPLE ID: COLLECTION DATE:	SD007 PC-TF4-SD007 07/31/93	7 1D007 93 011A1.	SD008 PC-TF4-SD008 07/31/93 PESHIT OH	3 D008 33 OUAL	SD009A PC-TF4-SD009A 07/31/93 RESULT OU	A 2009A 93 OHAL	SD009B PC-TF4-SD009B 07/31/93 RESULT OU	93 OUTAL	SD010A PC-TF4-SD010A 07/31/93	04 0010A 93 011AL	SD010B PC-TF4-SD010B 07/31/93 RESULT OUA	0010B
430 U 430 U 340 U 410 U 500 U 340 U 410 U 500 U 340 U 430 U 430 U 340 U 410 U 500 U 340 U 430 U 430 U 340 U 410 U 500 U 340 U 430 U 430 U 340 U 410 U 500 U 340 U 340 U 410 U 500 U 340 U 340 U 430 U 430 U 430 U 440 U 500 U 500 U 340 U 500 U	430         U         430         U         410         U         500         U           430         U         430         U         440         U         500         U           430         U         430         U         440         U         500         U           430         U         430         U         340         U         410         U         500         U           430         U         430         U         440         U         500         U           430         U         440         U         460         U         500         U           450         UL         450         UL         440         UL         540         UL           653         U         0.61         (L)         0.90         0         0.85         (L)           0.40         U         450         U         4.40         UL         5.40         UL         4.40         UL         5.40         UL           0.41         U         0.51         U         0.90         0         0.90         0         0.90         0           0.42         U         0.51 <th>CIVITA</th> <th>KESULI</th> <th>3605</th> <th>NESOL1</th> <th>100</th> <th>NESOLE 1</th> <th>1400</th> <th>TOSSIA.</th> <th>1</th> <th>TO COL</th> <th>1</th> <th>Nacori 1</th> <th>2</th>	CIVITA	KESULI	3605	NESOL1	100	NESOLE 1	1400	TOSSIA.	1	TO COL	1	Nacori 1	2
430 U 430 U 340 U 410 U 500 U 340 U 410 U 500 U 340 U 440 U 440 U 500 U 340 U 440 U 440 U 500 U 340 U 440 U 500 U 340 U 340 U 440 U 500 U 340 U 340 U 440 U 500 U 340 U 340 U 640 U	430 U 430 U 340 U 410 U 500 U 430 U 430 U 440 U 500 U 430 U 430 U 430 U 440 U 410 U 500 U 500 U 430 U 430 U 430 U 440 U 410 U 500 U 500 U 640 U	ug/kg	430	<b>&gt;</b> :	430	<b>&gt;</b> ;	340	<b>&gt;</b> :	410	<b>&gt;</b> :	200	<b>:</b>	340	<b>:</b>
430         U         410         U         500         U         340           430         U         440         U         410         U         500         U         340           430         U         420         U         420         U         420         U         400         U<	430 U 430 U 420 U 400 U 500 U 400 U 500 U 430 U 430 U 430 U 430 U 440 U 500 U	ug/kg	430	o =	430 430	o <b>=</b>	340	<b>&gt;</b> =	410	<b>&gt;</b> =	906	<b>&gt;</b> =	340	<b>-</b>
430 UL 430 UL 460 UL 360 UL 440 UL 540 UL 340 UL 653 UL 430 UL 663 UL 440 UL 540 UL 540 UL 360 UL 653 UL 65	430         U         430         U         410         U         500         U           430         U         430         U         42         B         46         B         55         B           430         U         430         U         42         B         46         B         55         B           450         UL         450         UL         440         UL         540         UL           0.53         U         0.51         U         0.90         0         0.85         U           0.40         U         0.33         U         0.10         U         0.13         U         0.46         U           2.40         U         0.39         U         0.31         U         0.18         0.15         U         0.46         U           2.40         U         0.39         U         0.31         U         0.13         U         0.16         U         0.15         U           0.78         U         0.10         U         0.10         U         0.10         U         0.14         U         0.15         U           0.30         U         0.30<	20.00	930	=	430	) =	340	) <b>=</b>	410	=	905	=	340	=
430         UL         430         UL         430         UL         430         UL         540         UL         540         UL         540         UL         540         UL         540         UL         540         UL         550         U           0.53         U         0.53         U         0.61         (L)         0.90         0         0.85         (L)         0.65         (U         0.65         0         0.65         0         0.65         0         0.65	450         UL         450         UL         460         UL         550         UL           450         UL         450         UL         440         UL         540         UL           450         UL         450         UL         440         UL         540         UL           613         U         613         U         611         U         613         U         614         U         646         U         646         U         646         U         646         U         640         U	119/kg	430	> =	430	=	340	) <b>=</b>	410	) <b>=</b>	200	<b>&gt;</b>	340	) D
4.60         UL         4.60         UL         4.40         UL         5.40         UL         3.60         UL         3.60         UL         5.60         UL         5.40         UL         3.60         3.60         UL         3.60         3.60         3.60         3.60         3.60         3.60         3.60         3.60         3.60         <	4.60         UL         4.60         UL         3.60         UL         4.40         UL         5.40         O.13         UL         0.013         UL         0.15         UL </td <td>ug/kg</td> <td>430</td> <td>ם</td> <td>430</td> <td>ם</td> <td>42</td> <td>Ø</td> <td>4</td> <td>A</td> <td>55</td> <td>B</td> <td>4</td> <td>æ</td>	ug/kg	430	ם	430	ם	42	Ø	4	A	55	B	4	æ
4.60         UL         4.60         UL         4.60         UL         4.60         UL         5.40         UL         5.40         UL         5.40         UL         5.40         UL         5.60         UL         6.31         UL         0.13         UL         0.10         UL         0.14         UL         0.15         UL         0.10         0.11         UL         0.14         UL         0.10         0.11         UL         0.14         UL         0.10         0.11         UL         0.12         UL         0.12         UL         0.12         UL         0.10         UL         0.12         UL<	4.60         UL         4.60         UL         3.60         UL         4.40         UL         5.40         UL           0.53         U         0.53         U         0.61         (L)         0.90         0         0.85         (L)           0.13         U         0.13         U         0.10         U         0.13         0B         0.15         U         0.046													
4.60         UL         4.60         UL         5.40         UL         3.60         UL         5.40         UL         3.60         UL         5.40         UL         3.60         UL         5.40         UL         3.60         4.40         UL         3.60         UL         3.60         3.70         B         1.70         UL         3.70         B         1.70         UL         3.70         B         1.70         UL         3.70         B         1.70         UL         3.70         B         1.70	4.60         UL         4.60         UL         4.40         UL         5.40         UL         6.40         UL         6.30         UL         6.30 <td></td>													
4,60         UL         4,60         UL         4,60         UL         4,60         UL         3,60         UL         6,10         UL         5,40         UL         3,60         UL         5,60         UL         3,60         UL         0,11         UL         0,13         UL         0,11         UL         0,13         UL         0,10         UL         0,13         UL         0,10         UL         0,14         UL         0,10         UL         0,15         UL         0,10         UL         0,15         UL         0,10         UL         0,10 <td>4.60         UL         4.60         UL         4.60         UL         4.60         UL         5.40         UL         6.13         UL         0.13         UL         0.13         UL         0.13         UL         0.13         UL         0.13         UL         0.15         UL         0.46         UL         0.46<td>mg/kg</td><td>•</td><td></td><td>•</td><td></td><td>•</td><td></td><td>•</td><td></td><td>• •</td><td></td><td>• ;</td><td></td></td>	4.60         UL         4.60         UL         4.60         UL         4.60         UL         5.40         UL         6.13         UL         0.13         UL         0.13         UL         0.13         UL         0.13         UL         0.13         UL         0.15         UL         0.46         UL         0.46 <td>mg/kg</td> <td>•</td> <td></td> <td>•</td> <td></td> <td>•</td> <td></td> <td>•</td> <td></td> <td>• •</td> <td></td> <td>• ;</td> <td></td>	mg/kg	•		•		•		•		• •		• ;	
0.53 U 0.53 U 0.61 (L) 0.90 O 0.85 (L) 0.05 (L)	0.53 U 0.53 U 0.61 (L) 0.90 0 0 0.85 (L) 0.46 U 0.13 U 0.13 U 0.13 U 0.13 U 0.146 U 0.240 U 0.290 0 0.38 U 0.466 U 0.290 0.31 U 0.13 U 0.13 U 0.46 U 0.290 0.31 U 0.10 U 0.14 U 0.15 U 0	mg/kg	4.6	_	4.60		3.6		4. 4		5.4		3.6	
0.13         U         0.24         U         0.24         U         0.21         U         0.24         U         0.10         U         0.13         U         0.10         U         0.13         U         0.13         U         0.10         U         0.15         U         0.10         U         0.15         U         0.15         U         0.10         U         0.15         U         0.10         U         0.10	0.13 U 0.13 U 0.10 U 0.13 OB 0.15 U 0.46 U 0.38 U 0.46 U 0.46 U 0.39 U 0.31 U 0.38 U 0.46 U 0.46 U 0.39 U 0.31 U 0.38 U 0.46 U 0.39 U 0.31 U 0.13 U 0.14 U 0.15 U 0.53 U 0.46 U 0.53 U 0.41 U 0.51 U 0	mg/kg	0.5		0.53		9.0		0.0		8.O		9.0	
0.13 U 0.13 U 0.10 U 0.13 0B 0.15 U 0.31 U 0.32 U 0.46 U 0.31 U 0.32 B 4.60 B 3.90 B 1.10 B 14.50 B 1.70 0 0.10 U 0.13 U 0.13 U 0.13 U 0.13 U 0.13 U 0.32 U 0.33 U 0.46 U 0.31 U 0.31 U 0.32 U 0.31 U 0.32 U 0.31 U 0.32 U 0.31 U 0.33 U 0.46 U 0.31 U 0.31 U 0.33 U 0.46 U 0.31 U 0.31 U 0.33 U 0.46 U 0.31 U 0.46 U 0.31 U 0.45 U 0.45 U 0.31 U 0.45 U	0.13 U 0.13 U 0.10 U 0.13 0B 0.15  2.40	mg/kg	•		•		• •		• (				' (	
0.40 U 0.39 U 0.31 U 0.38 U 0.46 U 0.31 U 0.31 U 0.32 U 0.31 U 0.31 U 0.33 U 0.46 U 0.31 U 0.31 U 0.33 U 0.46 U 0.31 U 0.31 U 0.32 U 0.32 U 0.32 U 0.33 U 0.33 U 0.33 U 0.34 U 0.33 U 0.	0.40 U 0.39 U 0.31 U 0.38 U 0.46 2.40 3.90 2.90 5.60 4.40  0.78 0B 1.60 0B 1.70 0B 3.20 B 4.50  0.93 B 4.60 B 3.90 B 1.10 B 14.50  0.13 U 0.13 U 0.10 U 0.13 U 0.15  0.40 U 0.39 U 0.31 U 0.31 U 0.51  0.40 U 0.39 U 0.31 U 0.51 U 0.51  0.40 U 0.39 U 0.31 U 0.51 U 0.51  0.40 U 0.39 U 0.31 U 0.51 U 0.51  0.40 U 0.39 U 0.31 U 0.51 U 0.51  0.40 U 0.39 U 0.31 U 0.51 U 0.51  0.40 U 0.39 U 0.31 U 0.51 U 0.51  0.40 U 0.39 U 0.31 U 0.51 U 0.51  0.40 U 0.39 U 0.31 U 0.51 U 0.51  0.40 U 0.39 U 0.31 U 0.51 U 0.51  0.50 U 0.51 U 0.51 U 0.51  0.50 U 0.50 U 0.50 U 0.50 U 0.51  0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.50 U 0.50 U 0.50 U 0.50 U 0.50  0.50 U 0.	mg/kg	0.1		0.13		0.1		0.1		0.1		0.1	
2.40         3.90         2.90         5.60         4.40         2.40           0.78         0.8         1.70         0.8         3.20         B         4.40         B           0.93         B         1.60         0.8         1.70         0.8         1.10         B         14.50         B         1.70         0           0.93         B         4.60         B         3.90         B         1.10         B         14.50         B         1.70         0           0.13         U         0.13         U         0.10         U         0.15         U         0.10         U         0.15         U         0.10           0.40         U         0.240         U         1.90         U         4.50         O         3         O         2.50           0.40         U         0.31         U         0.32         U         0.31         U         0.31         U         0.31         U         0.31         U         0.32         U         0.31         U         0.3	2.40       3.90       2.90       5.60       4.40         2.40       3.90       1.70       0.8       3.20       B       4.40         0.78       0.8       1.70       0.8       3.20       B       4.50         0.93       B       4.60       B       3.90       B       1.10       B       14.50         0.13       U       0.13       U       0.10       U       0.13       U       0.15       U	mg/kg		_	0.35		0.3		0.3		4.0		0.3	
2.40       3.90       5.60       4.40       2.40         2.78       0.78       0.8       1.70       0.8       1.70       0.8       1.70       0.8       1.70       0         0.93       B       4.60       B       3.90       B       1.10       B       14.50       B       1.70       0         0.13       U       0.13       U       0.10       U       0.13       U       0.15       U       0.10         2.40       U       2.40       U       1.90       U       4.50       0       3       0       2.50         0.40       U       0.39       U       0.31       U       0.51       U       0.41       U       0.51       U       0.42	2.40       3.90       2.90       5.60       4.40         2.78       0B       1.60       0B       1.70       0B       3.20       B       4.50         0.93       B       1.60       B       3.90       B       1.10       B       14.50         0.93       B       4.60       B       3.90       B       1.10       B       14.50         2.40       U       0.13       U       0.10       U       0.13       U       0.15       U       0.15         2.40       U       0.39       U       0.31       U       0.38       U       0.46       U         0.40       U       0.53       U       0.41       U       0.51       U       0.46       U         0.40       U       0.53       U       0.41       U       0.51       U       0.61       U       0.62       U       0.62       U       0.62       U       0.62       U	mg/kg			•		•				•		' (	
0.78         0B         1.60         0B         1.70         0B         3.20         B         4.50         B         1.70         0           0.93         B         1.60         OB         1.70         OB         3.20         B         1.70         OB         3.70         B         1.70         O         1.70         O         1.70         O         1.70         O         1.70         O         1.70         O         0.13         U         0.10         U         0.15         U         0.15         U         0.10         O         1.70         O         0.15         U         0.10         O         0.15         U         0.10         O         0.15         U         0.10         O         0.15         U         0.10         O	0.78       0B       1.60       0B       1.70       0B       3.20       B       4.50         0.93       B       4.60       B       3.90       B       1.10       B       14.50         0.13       U       0.13       U       0.10       U       0.13       U       0.15         2.40       U       0.39       U       0.31       U       0.38       U       0.46         0.40       U       0.39       U       0.41       U       0.51       U       0.46         0.40       U       0.39       U       0.41       U       0.51       U       0.61         0.40       U       0.39       U       0.41       U       0.51       U       0.61         0.40       U       0.39       U       0.41       U       0.51       U       0.61         0.40       U       0.39       U       0.41       U       0.53       U       0.61         0.40       U       0.50       U       0.53       U       0.61       U       0.61         0.40       U       0.60       B       10.20       B       12.20       B	mg/kg		Ş	3.90	_	2.9	0	5.6	Q	4. <b>4</b>	2	2.4	0
0.78         0B         1.60         0B         1.70         0B         3.20         B         4.50         B         1.70         OB           0.93         B         4.60         B         3.90         B         1.10         B         14.50         B         1.70         O           0.13         U         0.15         U         0.15         U         0.15         U         0.15         U         0.16         U         0.10         0.15         U         0.16         U         0.10         0.15         U         0.16         U         0.25	0.78         0B         1.60         0B         1.70         0B         3.20         B         4.50           0.93         B         4.60         B         3.90         B         1.10         B         14.50           0.13         U         0.13         U         0.10         U         0.13         U         0.15           2.40         U         0.240         U         0.190         U         0.15         U         0.15           0.40         U         0.39         U         0.31         U         0.38         U         0.46           0.40         U         0.53         U         0.41         U         0.31         U         0.51         U         0.46           0.40         U         0.39         U         0.31         U         0.38         U         0.46           0.40         U         0.39         U         0.31         U         0.38         U         0.46           0.30         B         10.60         B         10.20         B         12.20         B         79.20           6.30         U         10         6.30         U         6.30         U </td <td>mg/l</td> <td>•</td> <td></td> <td>•</td> <td></td> <td>1</td> <td></td> <td>•</td> <td></td> <td>•</td> <td></td> <td>•</td> <td></td>	mg/l	•		•		1		•		•		•	
0.78	0.78 0B 1.60 0B 1.70 0B 3.20 B 4.50  0.93 B 4.60 B 3.90 B 1.10 B 14.50  0.13 U 0.13 U 0.10 U 0.13 U 0.15  2.40 U 0.39 U 0.31 U 0.38 U 0.46  0.53 U 0.53 U 0.31 U 0.51 U 0.61  0.40 U 0.39 U 0.31 U 0.51 U 0.61  0.40 U 0.39 U 0.31 U 0.51 U 0.61  0.40 U 0.39 U 0.31 U 0.38 U 0.61  0.40 U 0.39 U 0.31 U 0.38 U 0.61  0.40 U 0.39 U 0.31 U 0.38 U 0.61  0.40 U 0.39 U 0.31 U 0.38 U 0.46  0.40 U 0.39 U 0.31 U 0.38 U 0.46  0.40 U 0.39 U 0.31 U 0.38 U 0.46  0.40 U 0.39 U 0.31 U 0.38 U 0.46  0.40 U 0.39 U 0.31 U 0.38 U 0.46	mg/kg			1		1 ,		1 6					
0.93         B         4.60         B         3.90         B         1.10         B         14.50         B         3.40           -	0.93 B 4.60 B 3.90 B 1.10 B 14.50  0.13 U 0.13 U 0.10 U 0.13 U 0.15  2.40 U 0.39 U 0.31 U 0.38 U 0.46  0.53 U 0.53 U 0.31 U 0.51 U 0.51  0.40 U 0.39 U 0.31 U 0.51 U 0.61  0.40 U 0.39 U 0.31 U 0.51 U 0.61  0.40 U 0.39 U 0.31 U 0.51 U 0.61  0.40 U 0.39 U 0.31 U 0.51 U 0.61  0.40 U 0.39 U 0.31 U 0.38 U 0.61  0.40 U 0.39 U 0.31 U 0.38 U 0.61  0.40 U 0.39 U 0.31 U 0.38 U 0.46  0.40 U 0.39 U 0.31 U 0.38 U 0.46  0.40 U 0.39 U 0.31 U 0.33 U 0.46	mg/kg			1.6		1.7		3.2		4.		1.7	
0.93 B 4.60 B 5.90 B 1.10 B 14.50 B 5.40  0.13 U 0.13 U 0.10 U 0.13 U 0.15 U 0.10  2.40 U 2.40 U 1.90 U 4.50 0 3 0 2.50  0.40 U 0.39 U 0.31 U 0.38 U 0.46 U 0.31 U 0.53 U 0.39 U 0.31 U 0.38 U 0.61 U 0.42  0.40 U 0.39 U 0.31 U 0.38 U 0.61 U 0.31  0.40 U 0.39 U 0.31 U 0.38 U 0.46 U 0.31  0.40 U 0.39 U 0.31 U 0.38 U 0.46 U 0.31  0.40 U 0.39 U 0.31 U 0.38 U 0.46 U 0.31  0.40 U 0.39 U 0.31 U 0.38 U 0.46 U 0.31  0.40 U 0.39 U 0.31 U 0.38 U 0.46 U 0.31  0.40 U 0.39 U 0.31 U 0.38 U 0.46 U 0.31	0.93 B 4.60 B 3.90 B 1.10 B 14.50  1.0 13 U 0.13 U 0.10 U 0.13 U 0.15  2.40 U 2.40 U 1.90 U 4.50 0 3  0.40 U 0.39 U 0.31 U 0.38 U 0.61  0.40 U 0.39 U 0.31 U 0.38 U 0.61  1.0 0.40 U 0.39 U 0.31 U 0.38 U 0.61  1.0 0.40 U 0.39 U 0.31 U 0.38 U 0.61  1.0 0.40 U 0.39 U 0.31 U 0.38 U 0.46  1.0 0.40 U 0.39 U 0.31 U 0.38 U 0.46  1.0 0.40 U 0.39 U 0.31 U 0.38 U 0.46  1.0 0.40 U 0.39 U 0.31 U 0.38 U 0.46  1.0 0.40 U 0.39 U 0.31 U 0.38 U 0.46  1.0 0.40 U 0.39 U 0.31 U 0.38 U 0.46	mg/kg					' '		, ,		' ;		, ,	
0.13 U 0.13 U 0.10 U 0.13 U 0.15 U 0.10  2.40 U 2.40 U 1.90 U 4.50 0 3 0 2.50  0.40 U 0.39 U 0.31 U 0.38 U 0.61 U 0.42  0.40 U 0.39 U 0.31 U 0.38 U 0.61 U 0.42  0.40 U 0.39 U 0.31 U 0.38 U 0.61 U 0.42  0.40 U 0.39 U 0.31 U 0.38 U 0.61 U 0.31  0.40 U 0.39 U 0.31 U 0.38 U 0.63 U 0.45  0.40 U 0.39 U 0.31 U 0.38 U 0.63 U 0.45  0.40 U 0.39 U 0.31 U 0.38 U 0.46 U 0.31  0.40 U 0.39 U 0.31 U 0.38 U 0.46 U 0.31  0.40 U 0.39 U 0.31 U 0.38 U 0.46 U 0.31  0.40 U 0.39 U 0.31 U 0.31 U 0.38 U 0.46 U 0.31	0.13 U 0.13 U 0.10 U 0.13 U 0.15 U 0.240 U 0.23 U 0.241 U 0.251 U 0.61 U 0.230 U 0.31 U 0.38 U 0.61 U 0.46 U 0.39 U 0.31 U 0.38 U 0.46 U 0.46 U 0.39 U 0.31 U 0.38 U 0.46 U 0.46 U 0.30 U 0.31 U 0.38 U 0.46 U 0.46 U 0.30 U 0.31 U 0.38 U 0.46 U 0.46 U 0.30 U 0.31 U 0.33 U 0.46 U 0.46 U 0.30 U 0.31 U 0.33 U 0.46 U 0.46 U 0.30 U 0.31 U 0.33 U 0.33 U 0.46 U 0.46 U 0.33 U 0.34 U 0.46 U 0.35	mg/kg			4.6(		3.9				14.		4.6	
0.13 U 0.13 U 0.10 U 0.13 U 0.15 U 0.10 2.40 U 2.40 U 1.90 U 4.50 0 3 0 2.50 0.40 U 0.39 U 0.31 U 0.38 U 0.46 U 0.31 U 0.40 U 0.39 U 0.31 U 0.38 U 0.61 U 0.42 0.40 U 0.39 U 0.31 U 0.38 U 0.61 U 0.42 0.40 U 0.39 U 0.31 U 0.38 U 0.63 U 0.31 0.40 U 0.39 U 0.31 U 0.38 U 0.46 U 0.31 0.40 U 0.39 U 0.31 U 0.38 U 0.46 U 0.31 0.40 U 0.39 U 0.31 U 0.38 U 0.46 U 0.31 0.40 U 0.39 U 0.31 U 0.38 U 0.46 U 0.31 0.40 U 0.39 U 0.31 U 0.38 U 0.46 U 0.31	0.13 U 0.13 U 0.10 U 0.13 U 0.15 2.40 U 2.40 U 1.90 U 4.50 0 3 0.40 U 0.39 U 0.41 U 0.51 U 0.61 0.40 U 0.39 U 0.31 U 0.38 U 0.61 0.30 B 10.60 B 10.20 B 12.20 B 79.20 6.30 U 10 6.30 U 6.30 U 23.70	mg/kg			1		•		•		r		•	
0.13 U 0.13 U 0.10 U 0.13 U 0.15 U 0.	0.13 U 0.13 U 0.10 U 0.13 U 0.15 U 0.	mg/kg			, ,		' (		1 (				, ,	
2.40 U 2.40 U 1.90 U 4.50 0 3 0 2.30 0.40 U 0.39 U 0.41 U 0.51 U 0.61 U 0.42 0.40 U 0.39 U 0.31 U 0.38 U 0.46 U 0.31 0.40 U 0.39 U 0.31 U 0.38 U 0.46 U 0.31 0.30 B 10.20 B 12.20 B 79.20 B 7.80 6.30 U 10 6.30 U 6.30 U 6.30 U 6.30	2.40 U 2.40 U 1.90 U 4.50 0 3 0.40 U 0.39 U 0.31 U 0.38 U 0.61 0.40 U 0.39 U 0.31 U 0.38 U 0.46 0.30 B 10.20 B 12.20 B 79.20 6.30 U 10 6.30 U 6.30 U 23.70	mg/kg			0.15		0.1		0.1				T.O.	
0.40         U         0.39         U         0.31         U         0.38         U         0.46         U         0.31         U         0.42           0.53         U         0.64         U         0.51         U         0.61         U         0.42           0.40         U         0.39         U         0.31         U         0.38         U         0.46         U         0.31           6.30         B         10.60         B         10.20         B         12.20         B         79.20         B         7.80           6.30         U         10         6.30         U         6.30         U         23.70         6.30	0.40 U 0.39 U 0.31 U 0.38 U 0.46 U 0.53 U 0.41 U 0.51 U 0.61 U 0.61 U 0.51 U 0.61 U 0.61 U 0.61 U 0.39 U 0.31 U 0.38 U 0.46 U 0.46 U 0.46 U 0.30 U 0.30 U 23.70	mg/kg			2.4(		1.9		4.5		m		2.5	
0.40 U 0.39 U 0.31 U 0.38 U 0.46 U 0.31 U 0.53 U 0.45 U 0.42 U 0.53 U 0.44 U 0.51 U 0.51 U 0.42 U 0.42 U 0.39 U 0.31 U 0.38 U 0.46 U 0.31 U 0.31 U 0.38 U 0.46 U 0.31 U 0.33 U 0.	0.40 U 0.39 U 0.31 U 0.38 U 0.46 U 0.53 U 0.46 U 0.53 U 0.41 U 0.51 U 0.61 U 0.61 U 0.53 U 0.40 U 0.51 U 0.61 U 0.61 U 0.46 U 0.39 U 0.31 U 0.38 U 0.46 U 0.46 U 0.30 U 0.30 U 23.70	mg/kg			1		•		•		•		• ;	
0.53 U 0.53 U 0.41 U 0.51 U 0.61 U 0.42  0.40 U 0.39 U 0.31 U 0.38 U 0.46 U 0.31  6.30 B 10.20 B 12.20 B 79.20 B 7.80  6.30 U 10 6.30 U 6.30 U 23.70 6.30	0.53 U 0.53 U 0.41 U 0.51 U 0.61 U 0.61 U 0.40 U 0.39 U 0.31 U 0.38 U 0.46 U 0.40 B 10.20 B 12.20 B 79.20 G.30 U 10 6.30 U 23.70	mg/kg			9.3		0.3		0.3		 0.		0.3	
6.30 U 10.60 B 10.20 B 79.20 B 73.70 6.30	6.30 U 10.60 B 10.20 B 12.20 B 79.20 6.30 U 10 6.30 U 6.30 U 23.70	mg/kg			0.5		0.4		0.5		٥. 0.		9.0	
6.30 U 0.39 U 0.31 U 0.38 U 0.46 U 0.31  6.30 B 10.20 B 12.20 B 79.20 B 7.80  6.30 U 10 6.30 U 5.370 6.30	6.30 B 10.20 B 12.20 B 79.20 6.30 U 10 6.30 U 6.30 U 23.70	mg/kg			٠		•		1		•		•	
6.30 B 10.60 B 10.20 B 79.20 B 7.80 6.30 U 6.30 U 5.30 6.30	6.30 B 10.60 B 10.20 B 12.20 B 79.20 6.30 U 10 6.30 U 6.30 U 23.70	mg/kg			95.0		0.3		0.3		· · ·		0.3	
6.30 B 10.60 B 10.20 B 79.20 B 7.80 6.30 U 10 6.30 U 23.70 6.30	6.30 B 10.60 B 10.20 B 79.20 6.30 U 10 6.30 U 6.30 U 23.70	mg/kg			•		•				•		• 1	
6.30 U 10 6.30 U 6.30 U 23.70 6.30	6.30 U 10 6.30 U 6.30 U	mg/kg	6.3	6	10.6		10.2		12.2		6/		æ.	
6.30 U 10 6.30 U 5.3.70 6.30	6.30 U 10 6.30 U 6.30 U										;		į	
		mg/kg			10		6.3		6.3		23.	2	6.3	

Appendix L - Sediment Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

SD115 PC-TF4-SD115 08/01/93	RESULT QUAL		1.20 U	0.37 B	0.80 U	1.10 U	1 U	1.10 U	1.20 U	1.70 U	1.90 U	U 78.0	U 78.0	1.50 U	1.50 U	1.30 U	1.10 U	1.90 U	1.50 U	1.30 U	1.50 U	1 U	1.20 U	1.30 U	1.20 U	O.87 U	1.20 U	3.50 U	1.20 B	1.10 U	1.20 U	3.70 U	3.30 U	6.90 B	_	1.10 U	3.50 U	
SD015 PC-TF4-SD015 08/01/93	RESULT QUAL		1.20 U	3.60 U	0.80 U	1.10 U	1 U	1.10 U	1.20 U	1.70 U	1.90 U	O.87 U	O.87 U	1.50 U	1.50 U	1.30 U	1.10 U	1.90 U	1.50 U	1.30 U	1.50 U	1 U	1.20 U	1.30 U	1.20 U	U 287	1.20 U	3.50 U	0.96 B	1.10 U	1.20 U	3.70 U	3.30 U	1.30 U	1.10 U	1.10 U	3.50 U	
SD014 PC-TF4-SD014 08/01/93	RESULT QUAL		1.20 U	0.37 B	0.80 UJ	1.10 UJ	1 U	1.10 U	1.20 UJ	1.70 U	1.90 U	O.87 U	O.87 U	1.50 U	1.50 U	1.30 U	1.10 U	1.90 U	1.50 U	1.30 U	1.50 U	1 U	1.20 UJ	1.30 U	1.20 U	O.87 U	1.20 U	3.50 U	1.20 B	1.10 U	1.20 UJ	3.70 U	3.30 U	4.10 UJ	1.10 U	1.10 U	3.50 U	
SD013 PC-TF4-SD013 08/01/93	RESULT QUAL		1.20 U	3.70 U	0.82 U	1.20 U	1 U	1.20 U	1.20 U	1.80 U	1.90 U	O.89 U	O.89 U	1.50 U	1.50 U	1.30 U	1.20 U	1.90 U	1.50 U	1.40 U	1.50 U	1 n	1.20 U	1.40 U	1.20 U	O.89 U	1.20 U		1.10 B	1.10 U			3.40 U		1.10 U	1.10 U		
SD012 PC-TF4-SD012 08/01/93	RESULT QUAL		1.20 U	3.70 U	0.83 U	1.20 U	1 U	1.20 U	1.20 U	1.80 U	1.90 U	0.90 U	O.90 U	1.50 U	1.50 U	1.30 U	1.20 U	1.90 U	1.50 U	1.40 U	1.50 U	1 · 0		1.40 U		O.90 U	1.20 U	3.60 U	1 B	1.10 U			3.50 U		_	1.10 U		
SD011 PC-TF4-SD011 08/01/93	RESULT QUAL		1.20 U	0.34 B	U 62.0	1.10 U	O.99 U	1.10 U	1.20 U	1.70 U	1.80 U	0.86 U	0.86 U	1.40 U	1.40 U	1.20 U	1.10 U	1.80 U	1.40 U	1.30 U	1.40 U	0.99 U	1.20 U	1.30 U	1.20 U	O.86 U	1.20 U	_	1.20 B	1.10 U	1.20 U	3.70 U	3.30 U	2 B	1.10 U	1.10 U	3.40 U	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:		thane ug/kg	e ug/kg						ug/kg		ug/kg	e ug/kg	hylene ug/kg	a ug/kg	oylene ug/kg		e ug/kg	ther ug/kg	ng/kg	ng/kg	ug/kg		ane ug/kg		le ug/kg	ug/kg	ug/kg	ug/kg	ane ug/kg	ng/kg	ug/kg	ng/kg	ng/kg	₹3//8n	8y/8n	ng/kg	
		8010	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethylene	1,2,3-Trichloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,2-trans-Dichloroethylene	1,3-Dichlorobenzene	1,3-cis-Dichloropropylene	1,3-trans-Dichloropropylene	1,4-Dichlorobenzene	2-Chloroethylvinyl ether	2-Chlorotoluene	4-Chlorotoluene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Dibromochloromethane	Dibromomethane	Methyl bromide	Methyl chloride	Methylene chloride	Tetrachloroethylene	Trichloroethylene	Vinyl chloride	

Appendix L - Sediment Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

3	QUAL	ם	=					D				D			Ω		=	=	=	<b>=</b>	<b>=</b>	ם	Þ	Ω	ב	<b>&gt;</b>	י ב	<b>D</b>	Þ	Þ	Þ	n	<b>&gt;</b>	<b>&gt;</b>	D	D	
SD115 PC-TF4-SD115 08/01/93	RESULT	1.20	1.60	9:1	7.40	4.30	2.40	1.90	2.40	2.40	15	7	7.10		430	430	430	430	930	500	430	430	430	1000	430	430	430	430	1000	430	430	1000	430	430	1000	430	
15	QUAL	=	> =	> :	>	<b>&gt;</b>	Þ	n	D	D	D	ם	n		E	· =	<b>:</b>	<b>:</b>	<b>&gt;</b>	<b>-</b>	<b>&gt;</b> =	=	) <b>=</b>	Þ	Þ	Þ	ם	D	D	n	Þ	Þ	Þ	D	D	D	
SD015 PC-TF4-SD015 08/01/93	RESULT (	-	25.1	00.1	2.40	4.30	2.40	1.90	2.40	2.40	15	2	7.10		0440	2		2 4	9 5	9 :	97	4 4	4	1100	440	440	440	440	1100	440	4	1100	440	4	1100	440	
<u>4</u>	QUAL	;	<b>&gt;</b> :	<b>-</b>	∍	ם	ם	D	Ω	ם		n	Ω		=	> :	>:	<b>&gt;</b> :	<b>&gt;</b> :	<b>&gt;</b> ;	<b>-:</b>	<b>&gt;</b> =	> =	<b>=</b>	ם ב	ב	מ	D	D	Þ	D	D	n	ם	ם	n	)
SD014 PC-TF4-SD014 08/01/93	RESULT Q		9. ·	09:T	2.40	4.30	2.40	1.90	2.40	2.40	3.80	7	7.10		Ş	000	430	430	430	430	0011	430	430	1100	430	430	430	430	1100	430	430	1100	430	430	1100	430	2
e,	QUAL	:	<b>&gt;</b> ;	Þ	Þ	ם	n	ם מ	ם	=	=	=	ם		:	<b>&gt;</b> :	<b>D</b> :	<b>&gt;</b>	Þ	<b>D</b> 1	<b>D</b> :	<b>&gt;</b> :	<b>-</b> :	<b>=</b>	<b>&gt;</b> =	ם כ	ם	D	D	ב	n	Þ	D	n	) <b>=</b>	=	)
SD013 PC-TF4-SD013 08/01/93	RESULT Q	,	1.90	1.60	2.50	4.40	2.50	06 1	2.50	2.50	7	2 10	7.30		;	450	450	450	450	450	1100	450	450	450	450	450	450	450	001	450	450	001	450	450	1100	9211	200
12	QUAL		Þ	D	Þ	n	=	<b>=</b>	) <b>=</b>	=	<b>=</b>	<b>=</b>	<b>&gt;</b> >			D	Þ	D	Þ	D	D	ה ב	<b>&gt;</b> :	<b>-</b> :	<b>&gt;</b> =	=	) D	=	=	) <b>=</b>	=	=	<b>=</b>	=	=	) <b>:</b>	2
SD012 PC-TF4-SD012 08/01/93	RESULT		1.90	1.70	2.50	4.40	0.5.0	1.90	06.1	65.7	V4	1, 10	7.40	!		420	450	450	450	450	1100	450	450	450	1100	450	450	450	9611	450	450	6	450	954	100	911	764
=	QUAL		D	n	Ξ	=	) <b>:</b>	<b>&gt;</b> :	<b>&gt;</b> :	<b>:</b>	o ;	<b>&gt;</b> :	o <b>:</b>	•		כ	ח	ם	D	ם	D	n	n	: כ	<b>&gt;</b> :	<b>&gt;</b> =	=	=	<b>=</b>	<b>-</b>	<b>&gt;</b> =	<b>:</b>	<b>-</b>	<b>&gt;</b>	<b>&gt;</b>	o ;	<b>-</b>
SD011 PC-TF4-SD011 08/01/93	RESULT		1.80	1.60	2.40	0. 4 0. 4	07:4	2.40	1.80	7.40	2.40	<u>4</u> (	7 [	•		430	430	430	430	430	1000	430	430	430	1000	054	430	430	1000	1999	430	430	1000	450	430	9001	430
LOCATOR: SAMPLE ID: TION DATE:	UNITS:		ug/kg	us/ks		Sylvis Sylvis	ng/kg	ug/kg	ug/kg	ng/kg	ng/kg	ug/kg	ug/kg	gw/gu		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/Kg	ug/Kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ng/kg	ug/kg	ug/kg	ug/kg
LOCATOR: SAMPLE ID: COLLECTION DATE:			1 2-Dichlorohenzene	1.2 Dimetholkenzene	1,2-Diniem ylocuzone	I,3-Dichlorobenzene	1,3/1,4-Dimethylbenzene	1,4-Dichlorobenzene	Benzene	Chlorobenzene	Ethylbenzene	Methyl-t-Butyl Ether	Styrene	Tolnene	CLP 3/90	1.2.4-Trichlorobenzene	1 2-Dichlorohenzene	1 3-Dichlorobenzene	1.4 Dichlorohenzene	2.7Oxvbis(1-Chloropropane)	2 4 5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methyl-4,6-Dimitrophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	4-Bromophenyl phenyl ether

Appendix L - Sediment Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

LOCATOR: SAMPLE ID: COLLECTION DATE:	LOCATOR: SAMPLE ID: TION DATE:	SD011 PC-TF4-SD011 08/01/93	1 D011 33	SD012 PC-TF4-SD012 08/01/93	3	SD013 PC-TF4-SD013 08/01/93	3 D013 33	SD014 PC-TF4-SD014 08/01/93	4 D014 33	SD015 PC-TF4-SD015 08/01/93	5 D015 93	SD115 PC-TF4-SD115 08/01/93	; 5115 3
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloro-3-methyl phenol	ag/kg	430	Ω	450	D	450	Ω	430	D	44	n	430	Þ
4-Chloroaniline	ug/kg	430	D	450	Ω	450	Þ	430	Ω	440	D	430	D
4-Chlorophenyl phenyl ether	ug/kg	430	D	450	D	450	D	430	n	440	D	430	n
4-Methylphenol	ug/kg	430	D	450	D	450	Ω	430	n	440	ם	430	n
4-Nitroaniline	ug/kg	1000	n	1100	n	1100	Ω	1100	n	1100	D	1000	n
4-Nitrophenol	ng/kg	1000	Ω	1100	Ω	1100	Ω	1100	n	1100	ם	1000	D
Acenaphthene	ug/kg	430	Ω	450	D	450	Ω	430	D	440	n	430	D
Acenaphthylene	ug/kg	430	n	450	n	450	n	430	Ω	440	D	430	ם
Anthracene	ug/kg	430	Ω	450	Ω	450	D	430	D	440	Ω	430	D
Benzo(a)anthracene	ug/kg	430	ם	450	n	450	D	430	D	440	ם	430	D
Benzo(a)pyrene	ug/kg	430	ם	450	Ω	450	Ω	430	D	440	Þ	430	Þ
Benzo(b)fluoranthene	ug/kg	430	ם	450	n	450	Ω	430	ם	440	D	430	D
Benzo(ghi)perylene	ug/kg	430	ם	450	ם	450	ב	430	D	440	D	430	Ω
, Benzo(k)fluoranthene	ug/kg	430	n	450	Ω	450	Ω	430	n	440	Ω	430	n
Butyl benzyl phthalate	ug/kg	430	D	450	D	450	D	430	n	440	Þ	430	Ω
Carbazole	ug/kg	430	ב	450	Ω	450	D	430	D	440	D	430	n
Chrysene	ug/kg	430	ם	450	D	450	ם	430	Þ	440	D	430	n
Di-n-butyl phthalate	ug/kg	430	Ω	450	D	450	D	430	n	440	Ω	430	D
Di-n-octyl phthalate	ug/kg	430	Þ	450	D	450	n	430	Ω	440	D	430	n
Dibenzo(a,h)anthracene	ug/kg	430	D	450	D	450	D	430	n	440	D	430	Ω
Dibenzofuran	ug/kg	430	Ω	450	D	450	ם	430	n	440	Þ	430	D
Diethyl phthalate	ug/kg	430	D	450	n	450	ח	430	n	440	n	430	Ω
Dimethyl phthalate	ng/kg	430	Ω	450	Þ	450	ם	430	Ω	440	D	430	n
Fluoranthene	ug/kg	430	ם	450	Ω	450	n	430	n	440	Þ	430	D
Fluorene	ug/kg	430	Ω	450	Ω	450	D	430	D	440	D	430	D
Hexachlorobenzene	ug/kg	430	ם	450	D	450	ם	430	D	440	ם	430	D
Hexachlorobutadiene	ug/kg	430	ם	450	D	450	ם	430	D	440	D	430	D
Hexachlorocyclopentadiene	ug/kg	430	D	450	n	450	ם	430	n	440	D	430	Þ
Hexachloroethane	ug/kg	430	D	450	ם	450	D	430	Þ	440	Þ	430	D
Indeno(1,2,3-c,d)pyrene	ug/kg	430	ם	450	Ω	450	ם	430	Ω	440	O	430	D
Isophorone	ug/kg	430	D	450	D	450	ם	430	Þ	440	Þ	430	n
N-Nitrosodi-N-Propylamine	ug/kg	430	Þ	450	n	450	D	430	D	440	D	430	n
N-Nitrosodiphenylamine	ug/kg	430	ם	450	n	450	n	430	D	440	D	430	n
Naphthalene	ug/kg	430	ם	450	Þ	450	ם	430	n	440	Þ	430	D
Nitrobenzene	ug/kg	430	Ω	450	Ω	450	n	430	Ω	440	D	430	ם
Pentachlorophenol	ug/kg	1000	D	1100	Ω	1100	Ω	1100	Ω	1100	D	1000	Þ

Appendix L - Sediment Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

SD115 PC-TF4-SD115 08/01/93	RESULT QUAL	430 U	430 U	430 U	430 U	430 U	430 U	1300	200 3	30 050			0.33		97/0	2.10		1.20 U	2 O		0.80 B	681		0.13 U						0.40 U				10.30
	QUAL RES	D	Þ	D	Ω	D	D			3 =	•	:	<b>)</b> ;						08		Ø			D			_	n		D		Ø		
SD015 PC-TF4-SD015 08/01/93	RESULT	44	440	4	4	440	440		. 4	4.00	cc.v	' 6	0.13	9.9		2.80	•	•	1.40		0.77	•	•	0.13	2.40	•	0.40	0.53	•	0.40	•	14.30		22.30
SD014 PC-TF4-SD014 08/01/93	T QUAL	n 0		n 0						70 07			0.53		9	3.30		1.30 0	2 U		2.30 B	0	0			3 O	_			0.40 U				41.10
SE PC-TF. 08/(	L RESULT	U 430		U 430		U 430	U 430	0301		OF.					716			D			<b>B</b>	106	2							D				4
SD013 PC-TF4-SD013 08/01/93	RESULT QUAL		450			450		9031	6	_		3.70			3/30	3.30			2.10	1970	1.30	779	20.30							0.41	_			21.50
	QUAL RI	n	Ď	Ω	ם	ם ב	В			_			o :			_		D C			<b>B</b>		_							0 Z				0
SD012 PC-TF4-SD012 08/01/93	RESULT	450	450	450	450	450	47	97.	1340	0.30	0.83	5.30	0.56	07.0	16300	2.4(		1.3(	2.10	1970	1.7	2090	27.5(	0.1	9.4	319	0.42	0.56	51.5	0.4	3.70	5.8		27.50
11 SD011 93	QUAL	Ω	D	Ω	n	ם ח	n		:	ر	0 6		)3 O	9		06		1.20 U	D		77 B		90		4.60 U		0.40 U			0.40 U		4.40 B		70
SD011 PC-TF4-SD011 08/01/93	RESULT	430	430	430	430	430	430		1240	ه م	0.53	4.40	0.53	0.66	943	2.90	1	<b>:</b>	2	1720	0.77	169	16.90	0.13	4	302	Ö	0.	43.50	Ö	e.	4.		24.70
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	119/169		ug/kg	nø/kø	ug/kg	ug/kg	•	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/l	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		mg/kg
S		Prensmithrene		Pyrene	bis(2-Chloroethoxy)methane	bis(2-Chloroethyl) ether	bis(2-Ethylhexyl)phthalate	METALS	Aluminum	Antimony	Arsenic	Barum	Beryllium	Cadmium	Calcium	Chromium	Chromium, Hexavalent	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	FIGU.	Total Petroleum Hydrocarbons

Appendix L - Sediment Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

COLLI	LOCATOR: SAMPLE ID: COLLECTION DATE:	SD016 PC-TF4-SD016 08/01/93		SD017 PC-TF4-SD017 08/01/93	SD018 PC-TF4-SD018 08/01/93	SD1 PC-LF6-SD1 08/17/93	8.0	SD2 PC-LF6-SD2 08/17/93		SD3 PC-LF6-SD3 08/17/93	•
Æ,	UNITS:	RESULT QU	QUAL	RESULT QUAL	RESULT QUAL	RESULT QUAL	L RESULT		QUAL	RESULT	QUAL
8010		-	=	111	11 06 6	2.90	5	0.90	5	1.30	Б
1,1,1,2-1 etrachioroethane	ug/kg /ka	5.70	<b>=</b>	81	1.10 B	3.30	, <u>m</u>	2.70	5	3.90	n
1,1,1-111011010culane	84/8n 64/011	20.1	) <b>=</b>	. 4 U	1.90 U	1.90	n	0.60	ħ	98.0	n
1 1 2-Trichloroethane	ue/ke	1.60	ם	5.70 UJ	2.70 U	2.70	ם	0.85	5	1.20	5
1 1-Dichloroethane	ug/kg	1.40	ב	s un	2.40 U	2.40	D	0.75	5	1.10	5
1.1-Dichloroethylene	ug/kg	1.60	D	S.70 UJ	2.70 U	2.70	n	0.85	5	1.20	5
1.2.3-Trichloropropane	ug/kg	1.70	D	9 n	2.90 U	2.90	n	0.90	ħ	1.30	<b>5</b>
1.2-Dibromoethane	ug/kg	2.50	n	8.70 UJ	4.20 U	4.20	n	1.30	5	1.90	5
1.2-Dichlorobenzene	ug/kg	2.70	n	9.30 UJ	4.50 U	4.50	n	1.40	ħ	7	5
1.2-Dichloroethane	ug/kg	1.20	ם	4.30 UJ	2.10 U	2.10	Ω	0.65	5	0.93	5
1 2-Dichloropropane	us/ks	1.20	n	4.30 UJ	2.10 U	2.10	Ω	0.65	5	0.93	5
1 2-trans-Dichlomethylene	119/kg	2.10	'n		3.50 U	3.50	Ω	1.10	5	1.60	B
1 3-Dichlomhenzene	119/kg	2.10	D	7.30 UJ	3.50 U	3.50	Ω	1.10	5	1.60	5
1.3-cis-Dichlomonopolene	110/kg	1.80	n		3.10 U	3.10	Ω	0.95	5	1.40	5
1 3-trans-Dichlomorronvlene		1.60	Þ	S.70 UJ	2.70 U	2.70	Ω	0.85	ħ	1.20	5
1 4-Dichlorobenzene		2.70	ם	9.30 UJ		4.50	Ω	1.40	5	2	5
2-Chloroethylvinyl ether		2.10	Þ	7.30 UJ		3.50	Ω	1.10	5	1.60	5
2-Chlorotoliiene	119/kg	1.90	ם			3.20	n		5	1.40	5
4-Chlorotoliiene	110/kg		ם	7.30 UJ		3.50	Ω	1.10	5	1.60	5
Bromohenzene	110/69		n			2.40	Ω	0.75	5	1.10	n
Bromochloromethans			n	m 9		2.90	Ω	0.90	5	1.30	'n
Recordichlocomethane			ם כ			3.20	Ω	_	n	1.40	5
Browoform	04/60 		1	fn 9		2.90	n	0.00	n	1.30	5
Carbon Tetrachloride	ug/kg		ב			2.10	n	0.65	5	0.93	n
Chlorobenzene	ug/kg		ב	fn 9	2.90 U	2.90	n	0.90	5	1.30	5
Chloroethane	ug/kg	•	n	17 UJ	8.40 U	8.40	n	2.60	5	3.70	5
Chloroform	ug/kg	0.92	Ø	3.20		1.20	æ	0.38	m	0.23	<b>m</b>
Dibromochloromethane	ug/kg	1.50	ם	5.30 UJ	1 2.60 U	5.60	n	0.80	5	1.10	3
Dibromomethane	ug/kg		n	fn 9	2.90	2.90	Ω	0.90	5	1.30	5
Methyl hmmide	nø/ka		D	IO 6I	n 6 1	6	ם	2.80	ā	4	5
Methyl chloride	ug/kg		n	I7 UJ	I 8.10 U	8.10	Ω	2.50	5	3.60	n
Methylene chloride	ng/kg		ם	7		1.90	æ	4.80	M	1.70	en ;
Tetrachloroethylene	ug/kg	1.50	D	-	7.60		ם	0.80	5	1.10	5
Trichloroethylene	ug/kg		ם	5.30 UJ	2.60	2	n	0.80	5	1.10	5
Vinyl chloride	ug/kg		ם	I7 U	r 8.40 U	8.40	D	2.60	5	3.70	5
		*********									
		*****									
こうとうそう ファイ・ファイン しんけい かんない はななななななななななななななななななななななななななななななななななな	Control of the contro										

Appendix L - Sediment Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

3 B3	QUAL	_	n	5		B						5		n	Ď	Þ	Þ	Þ	Þ	<b>&gt;</b>	<b>)</b>	<b>-</b> :	<b>=</b>	<b>&gt; &gt;</b>	n	ם	n	Þ	D	Þ	n	<b>&gt;</b>	<b>&gt;</b> :	D	
SD3 PC-LF6-SD3 08/17/93	RESULT	7	1.70	2.60	4.60	2.60	7	2.60	2.60	16	2.10	7.60		470	470	470	470	470	1100	470	410	470	470	470	470	470	1100	470	470	1100	470	470	1100	410	
Ġ	QUAL	Д	5	5	n	Þ	n	n	5	5	5	5		Þ	D	D	Þ	ם	D	Þ	ם	<b>:</b>	<b>-</b> =	<b>=</b>	ם	D	Þ	D	n	Þ	ם	Ω	ם	n	
SD2 PC-LF6-SD2 08/17/93	RESULT	0.23	1.20	1.80	3.20	1.80	1.40	1.80	1.80	11	1.50	5.30		2300	2300	2300	2300	2300	2600	2300	2300	2300	3300	300	2300	2300	2600	2300	2300	2600	2300	2300	2600	2300	
=	QUAL	ħ	5	5	5	B	5	5	5	5	ħ	n		Þ	D	D	D	D	D	n	ם	י ב	<b>-</b>	<b>=</b>	ם	D	Þ	D	Þ	n	n	ם	D	Þ	
SD1 PC-LF6-SD1 08/17/93	RESULT	4.50	3.90	5.80	01	5.80	4.50	5.80	5.80	35	4.80	17		1100	1100	1100	1100	1100	2600	1100	1100	1100	2600	811	1100	1100	2600	1100	1100	2600	1100	1100	2600	1100	
18	QUAL	- =	) <b>=</b>	ם כ	ח	כס	Ω	Ω	D	Ω	ם	Ω		D	D	Ω	n	ם	כ	O	D	D	o :	<b>&gt;</b> =	=	n	ם	Ω	Ω	D	D	Ω	D	Ω	
SD018 PC-TF4-SD018 08/01/93	RESULT	4 50	3 90	5.80	10	5.80	4.50	5.80	5.80	35	4.80	17		006	006	006	006	006	2200	006	006	006	2200	8	8	006	2200	006	006	2200	006	006	2200	006	
11	QUAL	Ε	3 =	_		_					n			n	ם	n	D	D	Ω	ם	Ω	D	<b>D</b> :	<b>&gt;</b>	=	=	) <b>=</b>	-	ם	ם	Ω	D	Ω	ם	
SD017 PC-TF4-SD017 08/01/93	RESULT	0 30	2	12°	; ;	12	9.30	12	12	73	10	35		1800	1800	1800	1800	1800	4400	1800	1800	1800	4400	0081	1800	1800	4400	1800	1800	4400	1800	1800	4400	1800	
916	QUAL	Ë	<b>=</b>	<b>=</b>	> =	ם ס	· =	ם ס	D	Ω	D	D		Ω	כי	ם	ם	ם	Þ	Ω	n	Ω	י כ	<b>:</b>	<b>=</b>	=	=	=	) D	Þ	Þ	Þ	Þ	Ω	
SD016 PC-TF4-SD016 08/01/93	RESULT	45	2.7	3.50	6.4	3.50	2.70	3.50	3.50	21	2.90	10		630	630	630	630	630	1500	630	630	630	1500	630	630	630	500	630	630	1500	630	630	1500	630	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:		ug/kg	ug/kg	26/NS	ug/kg ng/kg	94/61 95	ug/kg	ug/kg	ug/kg	ug/kg	gy/gu		110/60	ug/kg	119/89	110/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg /!-	9 (4) (4) (5)	20 (d)	94/95 1	16/76 110/kg	110/kg	ug/kg	ug/kg	gy/gn	ug/kg	
SCOLLECT		2	1,2-Dichlorobenzene	1,2-Dimemylbenzene	1,3-Dichlotobenzene	1,3/1,4-Dimentyloenzene		Chlorohenzene	Ethylbenzene	Methyl-t-Butyl Ether	Styrene	Toluene	7(6,2,00)	1.3.4 Ticklomberrane	1.2.7 Litemotorical	1.3. Dichlombenzene	1.4 Dichlorobangane	2.7Ovehis(1-Chloropropane)	2.4.5-Trichlorophenol	2.4.6-Trichlorophenol	2.4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chioronaphutalene	2-Uniorophenol	2-Mentyl-4,0-Dimmophenol	2-Methyliapid	2 Nitrografias	2.Nitronhenol	3 3'-Dichlorohenzidine	3-Nitroaniline	4-Bromophenyl phenyl ether	•

Appendix L - Sediment Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

SD3 PC-LF6-SD3 08/17/93	T QUAL	n 0	n 0	0	Ω 0	n 0	n 0	Ω 0.	Ω 0.	Ω 0.	Ω 0.	Ω 0.	Ω 0,	Ω 0.	Ω 0.	55	Ω 0.	n 0	n 0	n 0	Ω 0.	<b>D</b>	n 0.	Ω 0.	Ω 0.	Ω 0.	D 0.	n 0.	D O	O O	<b>n</b>	O O	0,	0.	0	o o	0	
S PC-L 08/	RESULT	470	470	470	470	1100	1100	470	470	470	470	4	470	470	470	ν.	470	470	470	4	4	4	470	47	4	47	47	47	470	470	470	470	470	470	470	470	1100	
SD2 PC-LF6-SD2 08/17/93	L QUAL	D O	D	<b>D</b>	D C	D	n (	D C	<b>D</b>	<b>U</b> (	<b>U</b>	U U	to o		TO C		n	D C	n c	_			<b>n</b> (	<b>D</b> 0		0 0	0 0	<b>D</b> 0	<b>D</b> . 0	n c	U C	<b>n</b> 0	0	n			n o	
S PC-LJ 08/1	RESULT	2300	2300	2300	2300	2600	2600	2300	2300	2300	2300	2300	2300	2300	2300	510	2300	2300	230	2300	2300	230	2300	230	<u>8</u>	230	230	230	230	230	230	230	230	2300	230	2300	2800	
SD1 PC-LF6-SD1 08/17/93	QUAL	Þ	D	ב	n	ח	D	D	ם	Þ	ם	ם	ם	D	Þ	D	n	ם	D	ם	ם	ם	D	Þ	D	Þ	D	Þ	ם	Þ	D	Þ	D	ם		D	D	
SD1 PC-LF6-SI 08/17/93	RESULT	1100	1100	1100	1100	2600	2600	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	2600	
SD018 PC-TF4-SD018 08/01/93	QUAL	D	n	D	D	ם	D	ם	n	D	ם	D	n	n	D	ם	ם	D	D	ם	D	Þ	Ω	Þ	n	D	ב	D	D	D	D	D	D	D		D	D	
SD018 PC-TF4-SD0	RESULT	906	006	906	006	2200	2200	006	006	906	906	006	906	906	900	98	006	006	006	900	906	006	900	006	906	8	006	006	006	006	906	900	900	906	006	906	2200	
)17 -SD017 1/93	QUAL	Ω	D	n	D	Ω	Ω	Ω	ם	ם	D	Þ	Þ	Þ	D	D	Ω	Þ	Þ	D	D	n	Ω	D	D	n	D	D	n	Ω		n	D	Ω	Ω	D		
SD017 PC-TF4-SD017 08/01/93	RESULT	1800	1800	1800	1800	4400	4400	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	4400	
116 SD016 [/93	QUAL	D	D	Ω	ם	D	D	ם	ם	Ω	Ω	Ω	Ω	n	Ω	Ω	Ω	Ω	ב	D	כ	ם	D	n	D	D	D	D	ם	ם	ם	D	D	Ω	Ω	n	n	
SD016 PC-TF4-SD016 08/01/93	RESULT	630	630	630	630	1500	1500	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	1500	
LOCATOR: SAMPLE ID: TION DATE:	UNITS:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ng/kg	ug/kg	ug/kg	ng/kg	ug/kg	ug/kg	ug/kg	ug/kg	ng/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	
LOCATOR: SAMPLE ID: COLLECTION DATE:	+ Jak	4-Chloro-3-methyl phenol	4-Chloroaniline	4-Chlorophenyl phenyl ether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(ghi)perylene	Benzo(k)fluoranthene	Butyl benzyl phthalate	Carbazole	Chrysene	Di-n-butyl phthalate	Di-n-octyl phthalate	Dibenzo(a,h)anthracene	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-c,d)pyrene	Isophorone	N-Nitrosodi-N-Propylamine	N-Nitrosodiphenylamine	Naphthalene	Nitrobenzene	Pentachlorophenol	

Appendix L - Sediment Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

COLLECTI	LOCATOR: SAMPLE ID: COLLECTION DATE:	SD016 PC-TF4-SD016 08/01/93	5 5016 3	SD017 PC-TF4-SD017 08/01/93	3	SD018 PC-TF4-SD018 08/01/93	3 D018 33	SDI PC-LF6-SDI 08/17/93	101 13	SD2 PC-LF6-SD2 08/17/93	SD2 33	SD3 PC-LF6-SD3 08/17/93	SD3 93
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Phenanthrene	ug/kg	630	ם	1800	Ω	006	D	1100	D	310		470	Ω
Phenol	ug/kg	630	Ω	1800	Ω	006	Þ	1100	ם	2300	n	470	ם ב
Pyrene	ug/kg	630	D	1800	Ω	006	Þ	1100	n	290		470	Ω
bis(2-Chloroethoxy)methane	ug/kg	630	n	1800	Ω	006	D	1100	D	2300	ם	470	Ω
bis(2-Chloroethyl) ether	ug/kg	630	Ω	1800	D	006	D	1100	D	2300	ם	470	ם
bis(2-Ethylhexyl)phthalate	ng/kg	82	æ	1800	Ω	006	n	1100	Ω	2300	Ω	470	D
METALS													
Aluminum	mg/kg	1940		8370		2660		•		•		•	
Antimony	mg/kg	8.70	OL.	30.20	Π	14.4	n C	14.30	nr n	32.80	OL OL	6.4	O OL
Arsenic	mg/kg	0.95		15.60		3.70		2.50		11.90		2.80	
Ватіит	mg/kg	10.40	0	41.10		14.70	0	•		•			
Beryllium	mg/kg	0.77		2.70	n	1.30		1.30		2.90		0.5	
Cadmium	mg/kg	96.0		3.40		1.60		1.60	ם	3.60	) OL	0.71	n 1
Calcium	mg/kg	13300		141000		57200		ı		•		1	
Chromium	mg/kg	4.80		32.20		12.30	_	4.90	1	15.90	_	7.6	
Chromium, Hexavalent	Ugu ∵	•		•		ı		0.01	Ω	0.0	n	0.0	1 O
Cobalt	mg/kg	1.70	n -	9		2.90	n (	•		ı		•	
Copper	mg/kg	2.90	D -	10.10	ח	4.80		6.20	0	16.40	0	11.80	0
lion	mg/kg	2250		10700		3310		i		•		ı	
Lead	mg/kg	2.20	<b>B</b>	7.30	æ	1.60	æ	5.30	×	177	-	1.61	<b>.</b> 0
Magnesium	mg/kg	1160		8060		5440		•		•		•	
Manganese	mg/kg	22.30		171		55.50	_	ı		•		1	
Mercury	mg/kg	0.19	Þ	0.67		0.32	D	0.32		0.73	D	0.14	Φ
Nickel .	mg/kg	6.70	D i	23.50	Ω	11.20		11.10	ΩΓ	25.50		7.9	
Fotassium	mg/kg	439		1960		729	Þ	•		•		•	
Selenium 2:	mg/kg	0.58		3.30		1.20		0.95	_	2.30		4.0	_
Silver	mg/kg	0.77		2.70		1.30		1.30	D	2.90	OL.	0.5	0 /
Nodium 	mg/kg	63.90		207	0	81.50		į		•		•	
Thallium 	mg/kg	0.58	D	7		96.0	_	0.95	'n	2.20	) OL	0.43	3 OL
Vanadium	mg/kg	9		37.60		13.40		•		٠		•	
Zinc	mg/kg	7.60		40.90	æ	14.10		20.70	æ	199	Ø	80.70	<b>8</b> 0
ПРН													
Total Petroleum Hydrocarbons	3/200	83.60		1060		346		5		3		•	
	o. O.					2		<b>?</b>		*		61	

	QUAL		n	8	Ω	Ω	Ω	Ω	Ω	n	Ω	Ω	n	Ω	n	ם	Ω	m	ם	ā	'n	n	Þ	Q.	D	D	ñ	D	В	Ω	Ω	n	Ω	M	Ω	Ω	n	
SD4 PC-LF6-SD4 08/17/93	RESULT QU		1.40	0.72	0.91	1.30	1.10	1.30	1.40	7	2.10	0.98	0.98	1.70	1.70	1.40	1.30	2.10	1.70	1.50	1.70	1.10	1.40	1.50	1.40	86.0	1.40	3.90	19.0	1.20	1.40	4.20	3.80	1.50	1.20	1.20	3.90	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	
COLLEC		8010	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethylene	1,2,3-Trichloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,2-trans-Dichloroethylene	1,3-Dichlorobenzene	1,3-cis-Dichloropropylene	1,3-trans-Dichloropropylene	1,4-Dichlorobenzene	2-Chloroethylvinyl ether	2-Chlorotoluene	4-Chlorotoluene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Dibromochloromethane	Dibromomethane	Methyl bromide	Methyl chloride	Methylene chloride	Tetrachloroethylene	Trichloroethylene	Vinyl chloride	

COLLECTION DATE:	SAMPLE ID: TION DATE:	08/17/93	PC-LF6-SD4 08/17/93
	UNITS:	RESULT	QUAL
8020		•	•
1,2-Dichlorobenzene	ug/kg	2.10	3 5
I,2-Dimethylbenzene	ug/kg	o r	
I,3-Dichlorobenzene	ug/kg	2.70	
1,3/1,4-Dimethylbenzene	ng/kg	4.80	_
1,4-Dichlorobenzene	ug/kg	2.70	-
Benzene	ug/kg	2.10	_
Chlorobenzene	ug/kg	2.70	n o
Ethylbenzene	ug/kg	2.70	U O
Methyl-t-Butyl Ether	ug/kg	17	5
•	ug/kg	2.30	00 U
Toluene	ug/kg	∞	5
CLP 3/90		į	
1,2,4-Trichlorobenzene	ug/kg	200	
1,2-Dichlorobenzene	ug/kg	200	
1,3-Dichlorobenzene	ug/kg	200	
1,4-Dichlorobenzene	ug/kg	200	
2,2'-Oxybis(1-Chloropropane)	ug/kg	200	
2,4,5-Trichlorophenol	ug/kg	1200	
2,4,6-Trichlorophenol	ug/kg	200	
2,4-Dichlorophenol	ug/kg	200	
2,4-Dimethylphenol	ug/kg	200	
2,4-Dinitrophenol	ug/kg	1200	
2,4-Dinitrotoluene	ug/kg	200	
2,6-Dinitrotoluene	ug/kg	200	
2-Chloronaphthalene	ug/kg	200	
2-Chlorophenol	ug/kg	200	
2-Methyl-4,6-Dimitrophenol	ug/kg	1200	
2-Methylnaphthalene	ug/kg	200	
2-Methylphenol	ug/kg	200	
2-Nitroaniline	ug/kg	1200	
2-Nitrophenol	ug/kg	200	
3,3'-Dichlorobenzidine	ug/kg	200	
3-Nitroaniline	ug/kg	1200	

SD4 33	QUAL	n	n	n	n	D	Ω	n	D											Ω	D	n	n	n		n	Ω	ם	n	D		D	D	Ω	Ω	n	D
SD4 PC-LF6-SD4 08/17/93	RESULT	200	200	200	200	1200	1200	200	200	460	450	320	069	19	069	99	88	430	45	200	200	200	200	200	650	200	200	200	200	200	120	200	200	200	200	200	1200
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ng/kg	ug/kg	ng/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
COLLEC	je <sup>s</sup>	4-Chloro-3-methyl phenol	4-Chloroaniline	4-Chlorophenyl phenyl ether	4-Methylphenol	4-Nitroamiline	4-Nitrophenol	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(ghi)perylene	Benzo(k)fluoranthene	Butyl benzyl phthalate	Carbazole	Chrysene	Di-n-butyl phthalate	Di-n-octyl phthalate	Dibenzo(a,h)anthracene	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-c,d)pyrene	Isophorone	N-Nitrosodi-N-Propylamine	N-Nitrosodiphenylamine	Naphthalene	Nitrobenzene	Pentachlorophenol

Phenanthrene ug/kg 460 Phenol ug/kg 500 Pyrene ug/kg 500 bis/2-Chloroethoxy)methane ug/kg 500 bis/2-Chloroethoxy)methane ug/kg 500 bis/2-Chloroethy) ether ug/kg 500 bis/2-Ehylhexy)phthalate ug/kg 600 bis/2-Ehylhexy)phthalate u	11.T QUAL 460 U 500 U 500 U 500 U 500 U 6.80 UL 2 B B B B C C C
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	8. 19. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.
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	.80 .76
	.80 .61 .76
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m. Im. Im., Hexavalent ium. ium. ium. ium. ium. ium. ium. ium.	0.61
m. .m., Hexavalent .um .e.se     	0.76
im. Hexavalent tum. eise fin	, vv ,
Hexavalent	5
Hexavalent	
	10.0
	. ;
	13.80
	٠ ;
	00.20
<b>.</b>	0.15
	5.30
	•
	0.97
	0.61
Sodium mg/kg	
Thallium mg/kg	0.46
Vanadium mg/kg	•
mg/kg	67.40
Total Petroleum Hydrocarbons mg/kg	450

Appendix L - Surface Water Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

wild of 35         U         0.35         U         0.35 <th>0.35         U         0.35         U         0.40         U         0.40</th> <th>LOCATOR: SAMPLE ID: COLLECTION DATE: UNITS:</th> <th>SW001 PC-TF4-SW001 07/28/93 RESULT QUAL</th> <th>Ψ</th> <th>SW002 PC-TF4-SW002 07/28/93 RESULT QUAL</th> <th>SW003 PC-TF4-SW003 07/28/93 RESULT QUAL</th> <th>SW004 PC-TF4-SW004 07/28/93 RESULT QUAL</th> <th> <b>~_ ~</b></th> <th>SW005 PC-TF4-SW005 07/30/93 ESULT QUAL</th> <th>SW006 PC-TF4-SW006 07/30/93 RESULT QU</th> <th>, voo6 3 QUAL</th>	0.35         U         0.40	LOCATOR: SAMPLE ID: COLLECTION DATE: UNITS:	SW001 PC-TF4-SW001 07/28/93 RESULT QUAL	Ψ	SW002 PC-TF4-SW002 07/28/93 RESULT QUAL	SW003 PC-TF4-SW003 07/28/93 RESULT QUAL	SW004 PC-TF4-SW004 07/28/93 RESULT QUAL	<b>~_ ~</b>	SW005 PC-TF4-SW005 07/30/93 ESULT QUAL	SW006 PC-TF4-SW006 07/30/93 RESULT QU	, voo6 3 QUAL
0.35         U         0.35         U         0.46	0.45         U         0.45         U         0.46	l/8n	0.35	n	0.35 U		0.35 U		0.35 U	0.35	
0.40         U         0.20	0.40         U         0.32         U         0.35         U         0.35         U         0.35         U         0.30	l/gn	0.35	Þ	0.35 U					0.35	
0.25         U         0.25	0.25         U         0.25	∫/gn	0.40	n						0.40	
0.35         U         0.35	0.35         U         0.35	ng/I	0.25	Ω	•					0.25	
0.35         U         0.30	0.35         U         0.35	l/gu	0.35	n						0.35	
0.35         U         0.35	0.35         U         0.35	l/gn	0.35	Ω						0.35	
0.35         U         0.35	0.35         U         0.35	1/gn	0.35	Ω						0.35	
0.30         U         0.30	0.30         U         0.30	ng/l	0.35	n						0.35	Þ
0.25         U         0.20	0.25         U         0.25         U         0.25         U         0.25         U         0.25         U         0.25         U         0.26         U         0.20	l/gn	0.30	D						0:30	
0.30         U         0.30         U         0.06         0.06         0.30         U         0.30	0.30         U         0.30         U         0.06         0.06         0.30         U         0.30           0.20         U         0.30         U         0.30         U         0.30         U         0.30           0.20         U         0.20         U         0.20         U         0.30         U         0.30           0.20         U         0.20         U         0.20         U         0.20         U         0.30           0.20         U         0.20         U         0.20         U         0.20         U         0.30           0.20         U         0.20         U         0.20         U         0.20         U         0.20           0.40         U         0.20         U         0.20         U         0.20         U         0.20           0.40         U         0.40         U         0.40         U         0.40         U         0.25	∏⁄gn	0.25	D						0.25	
0.30         U         0.20	0.30         U         0.30	l/gn	0:30	D			90:0			0.30	n
0.20         U         0.20	0.20         U         0.20	ng/l	0.30	D			0.30 U			0.30	
0.30         U         0.32         U         0.25         U         0.25         U         0.25         U         0.25         U         0.20	0.30         U         0.25	ug/l	0.20	D						0.20	
0.25         U         0.20	0.25         U         0.25         U         0.25         U         0.25         U         0.25         U         0.20	l/gu	0:30	D						0.30	
0.20         U         0.20	0.20         U         0.22         U         0.25         U         0.20	l/gu	0.25	ב						0.25	
0.40         U         0.25	0.40         U         0.40	l/gu	0.20	Þ						0.20	
0.25         U         0.26         U         0.26         U         0.26         U         0.26         U         0.25	0.25         U         0.25	ng/l	0.40	ם י						0.40	
0.35         U         0.35	0.53         U         0.54	ng/J	0.25	<b>&gt;</b> :						0.25	
0.25         U         0.25	0.25         U         0.26	<u> </u>	0.33	<b>&gt;</b> =						0.35	
0.40         U         0.50	0.40         U         0.40	Van	0.25	) <b>=</b>						0.2	
0.50         U         0.53         U         0.50	0.50         U         0.53         U         0.35         U         0.30	ng/I	0.40	ם	-					0.40	
0.35         U         0.30         U         0.40	0.35         U         0.30         U         0.40	l/gn	0.50	Ω						0.50	
0.35         U         0.30         U         0.50         U         0.20         U         0.20         U         0.20         U         0.20         U         0.20         U         0.30         U         0.30         U         0.30         U         0.30         U         0.30         U         0.30         U         0.40	0.35         U         0.36         U         0.36         U         0.36         U         0.30         U         0.40	ng/l	0.35	Ω						0.35	
0.50         U         0.20         U         0.20         U         0.20         U         0.20         U         0.20         U         0.30         U         0.30         U         0.30         U         0.30         U         0.30         U         0.40	0.50 U 0.33 U 0.78 J 0.18 U 0.20 U 0.30 U 0.40 U 0.	l∕gu	0.35	n						0.3	
0.13         0.35         U         0.35         U         0.78         J         0.18         0.20           0.30         U         0.40	0.13         0.35         U         0.35         U         0.78         J         0.18         0.20           0.30         U         0.30         U         0.30         U         0.30         U         0.30           0.40         U         0.40         U         0.40         U         0.40         U         0.40           0.45         U         0.45         U         0.45         U         0.45         U         0.45           0.50         U         0.50         U         0.45         U         0.45         U         0.45           0.29         B         0.32         B         0.17         B         1         J         0.18         B         0.30           0.30         U         0.30         U         0.05         J         0.18         B         0.30         U         0.30           0.55         U         0.30         U         0.06         J         0.30         U         0.30           0.55         U         0.55         U         0.55         U         0.55         U         0.55	l/8n	0.50	D			-			0.50	
0.30 U 0.40 U 0.30 U 0.40 U 0.	0.30 U 0.40 U 0.30 U 0.40 U 0.	l/gu	0.13						0.18	0.20	_
0.40 U 0.45 U 0.	0.40 U 0.45 U 0.	ng/l	0:30	D				_		0.3(	D (
0.45 U 0.50 U 0.50 U 0.50 U 0.50 U 0.50 U 0.50 U 0.30 U 0.55 U 0.55 U 0.30 U 0.55 U 0.30 U 0.55	0.45 U 0.50 U 0.30 U 0.30 U 0.30 U 0.30 U 0.55 U 0.30 U 0.55 U 0.55 U 0.30 U 0.55	l/gn	0.40	D						0.4	D (
0.50 U 0.50 U 0.50 U 0.50 U 0.07 J 0.50 U 0.50 U 0.50 U 0.33 U 0.32 B 0.17 B 1 J 0.18 B 0.33 U 0.30 U 0.55	0.50 U 0.50 U 0.50 U 0.50 U 0.07 J 0.50 U 0.50 U 0.30 U 0.32 B 0.17 B I J 0.18 B 0.33 U 0.30	l/gu	0.45	ם				_		0.4	
0.29         B         0.32         B         0.17         B         1         J         0.18         B         0.33           0.30         U         0.30         U         0.30         U         0.30         U         0.30           0.30         U         0.30         U         0.30         U         0.30         U         1.20           0.55         U         0.55         U         0.55         U         0.55         U         0.55	0.29         B         0.17         B         1         J         0.18         B         0.33           0.30         U         0.30         U         0.30         U         0.30         U         0.30           0.30         U         0.30         U         0.30         U         0.30         U         1.20           0.55         U         0.55         U         0.55         U         0.55         U         0.55	l/gn	0.50	D			0.00				
0.30 U 0.30 U 0.30 U 0.05 0.30 U 0.30	0.30 U 0.30 U 0.30 U 0.05 0.30 U 0.35 U 0.35 U 0.55 U 0.55 U 0.55	l/gu	0.29	М			-	_			
0.30 U 0.30 U 0.30 U 0.06 J 0.30 U 1.20 0.55 U 0.55 U 0.55 U 0.55 U 0.55	0.30 U 0.30 U 0.30 U 0.06 J 0.30 U 1.20 0.55 U 0.55 U 0.55 U 0.55 U 0.55	l/gn	0.30	D			0.05				
0.55 U 0.55 U 0.55 U 0.55 U 0.55	0.55 U 0.55 U 0.55 U 0.55 U 0.55	ug/l	0.30	Þ				_			0
		∫/gn	0.55	n				_			

Appendix L - Surface Water Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

y <b>o</b>	QUAL		D	Ω	D	Þ	ם	<b>&gt;</b> :	<b>-</b> :	<b>&gt;</b> :	<b>&gt;</b> :	Þ	:	<b>&gt;</b> :	<b>:</b>	<b>&gt;</b> :	<b>)</b>	<b>&gt;</b> :	<b>)</b> ;	<b>)</b> :	<b>&gt;</b> :	<b>&gt;</b> :	<b>&gt;</b>	<b>=</b>	<b>=</b>	) <b>=</b>	> =	<b>:</b>	<b>:</b>	<b>:</b>	<b>)</b>	<b>:</b>	<b>&gt;</b> :	<b>&gt;</b> ;	>	
SW006 PC-TF4-SW006 07/30/93		0.16	0.20	0.20	0.50	0.15	0.35	0.25	0.20	2	0.25	0.25		n 1	n ș	ຸລຸ ເ	٠	ر م <b>د</b>	n ș	ر و	٠, د د	n 4	n <b>v</b>	ر د	3 4	) V	י ב	3 4	ר ע	n ş	97	י ח	n '	ח י	^	
SV PC-TF 07/	RESULT														•	. •			•	•				•	•		•	-		•						
90	QUAL	מ	ם	ם	D	ם	Þ	D ·	D :	<b>&gt;</b>	>	Þ	:	<b>)</b>	<b>&gt;</b> :	<b>&gt;</b>	Þ	ם	D :	<b>D</b> :	<b>&gt;</b>	<b>&gt;</b> :	<b>-</b> :	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>;</b>	<b>:</b>	> :	<b>&gt;</b> :	<b>&gt;</b>	<b>&gt;</b> :	<b>&gt;</b>	<b>&gt;</b>	
SW005 PC-TF4-SW005 07/30/93	RESULT	0.15	0.20	0.20	0.50	0.15	0.35	0.25	0.20	S	0.25	0.25	•	'n	n (	25	<b>.</b>	<b>v</b> o :	<b>S</b>	20	٠ ر <b>د</b>	'n,	n 4	٠ ﴿	3 4	n 4	٠ ﴿	3 '	o <b>'</b>	n (	8,	n '	n '	n, i	~	
8	RES																																	_	_	
3 7004	QUAL	n	D				Ø					Ø	:	<b>)</b>	<b>D</b> :	)	∍	Þ	Þ	ם	ם כ	<b>:</b>	<b>&gt;</b>	<b>:</b>	<b>&gt;</b> :	<b>&gt;</b>	<b>&gt;</b>	<b>:</b>	<b>&gt;</b> ;	<b>&gt;</b> ;	Þ;	<b>&gt;</b> ;	<b>•</b> ;	<b>-</b>	₽	
SW004 PC-TF4-SW004 07/28/93	RESULT	0.15	0.20	0.20	0.50	0.15	0.14	0.25	0.16	S	0.25	0.18	•	S.	S ;	20	S	S	S	20	S.	vo i	'n	n (	₹,	n v	ივ	₹,	n '	<b>o</b> ;	70	S.	S.	S	•	
<b>2</b>																															_	_	_	_	_	
, v003 3	QUAL	Þ	D	n	<b>D</b> (							m m		Þ	Þ	Þ	Þ	Þ	Þ	ב	D	<b>&gt;</b>	Þ;	<b>)</b> ;	<b>&gt;</b>	<b>)</b> ;	<b>)</b> ;	; <i>د</i>	; <b>ر</b>	<b>-</b>	י כ	Þ	Þ	_	_	
SW003 PC-TF4-SW003 07;28/93	RESULT	0.15	0.20	0.20	0.50	0.15	0.35	0.25	0.20	S	0.2	0.33		S	S	2	s.	2	2	70	2	<b>.</b>	<b>'</b>	n ;	₹,	n '	n (	25,	<b>'</b>	S	20	~	\$	<b>~</b>	<b>S</b>	
X.		_		_		_	_	_		_	_	•		_	_	_	_		1	ı	D		D :	_		<b>-</b> ,	<b>-</b>	_	<b>-</b>	_	ם	5	'n	ם	5	
2 W002 33	QUAL	2	9	<b>n</b> 0	n 0	S	5 U	S U	ς.	D	4			٦	ب	<b>.</b>	٦	ב	D	ם	_	Þ	<b>.</b>	ا	,	,	_	_	_			_	_	_	_	
SW002 PC-TF4-SW002 07/28/93	RESULT	0.15	0.20	0.20	0.50	0.15	0.3	0.25	0.15	2	0.1	0.11		S	S	20	S	S	\$	20	S	v	<b>S</b>	S	8	YO '	S	20	<b>~</b>	v.	20	S	S	S	S	
ē.		æ	<b>.</b>	ם	b	89	ם			D		м		D	D	Þ	Þ	ם	Ω	n	D	Þ	ם:	Þ	<b>D</b>	<b>D</b> :	Þ	n	Þ	n.	D	Þ	n	n	n	
31 ;W001 /93	QUAL		0.17	0.20	0.50	0.17	0.35	60.0	0.11		0.19	0.16																								
SW001 PC-TF4-SW001 07/28/93	RESULT	-	· c	0	0	0	0	õ	0.	S	0	0		2	5	2	3	\$	5	20	5	2	v.	•	8	S.	~	8	×	S	20	3	5	S	S	
	UNITS: R	y was	1/6/1	l/an	ng/I	/Zn	ng/l	ug/I	ug/I	J/gn	√Jn Ng/I	l/gn		ng∕1	√8n	l/gu	l/gn	ug/l	l/gu	l/gu	l/gn	l/gn	ng/l	l/gu	∥⁄gn	//gn	ng∕l	ng/l	ng/l	ng/I	ng/I	ng/l	l/gn	ng/l	ng/I	
LOCATOR: SAMPLE ID: COLLECTION DATE:	N5																																			
s ourect					je Je	l.									ropane)										tenol					•		l ether	lou		l ether	
Ū			PHYPHP	mzene.	.3/1.4-Dimethylbenzene	nzene				Ether				1,2,4-Trichlorobenzene	2,2'-Oxybis(1-Chloropropane)	ophenol	ophenol	henol	henot	lous	uene	uene	thalene	o o	2-Methyl-4,6-Dinitrophenol	thalene	70			3,3'-Dichlorobenzidine		4-Bromophenyl phenyl ether	4-Chloro-3-methyl phenol	2	4-Chlorophenyl phenyl ether	
	20	8020	1.2-Diction Obstacine	3-Dichlorobenzene	4-Dimet	.4-Dichlorobenzene	<u>1</u>	Chlorobenzene	Ethylbenzene	Methyl-t-Butyl Ether	. 2	2	<b>4</b> 2	Trichlor	Oxybis(1-	2,4,5-Trichlorophenol	2.4.6-Trichlorophenol	2.4 Dichlorophenol	2.4-Dimethylphenol	2,4-Dinitrophenol	2.4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	thyl-4,6-	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	Dichloro	3-Nitroaniline	nedome	loro-3-m	4-Chloroaniline	lorophen	•
		8020	, .	. C.	1.3/1.	4-D	Benzene	Chlor	Ethylt	Methy	Styrene	Toluene	LCBNA	1,2,4	2,2,-(	2,4.5	2.4.6	2.4D	2.4-D	2.4.D	2.4-D	2,6-L	2-C	7 7	2-Me	2-Me	2-Me	2-Ni	2-Nit	333.	3-Ni	4-Br	<u>수</u>	<u>វ</u>	<u>វ</u>	

Appendix L - Surface Water Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

согте	LOCATOR: SAMPLE ID: COLLECTION DATE:	SW001 PC-TF4-SW001 07/28/93	.1 W001 93	SW002 PC-TF4-SW002 07/28/93	2 W002 33	SW003 PC-TF4-SW003 07/28/93	3 W003 93	SW004 PC-TF4-SW004 07/28/93	4 W004 33	SW005 PC-TF4-SW005 07/30/93	5 W005 13	SW006 PC-TF4-SW006 07/30/93	6 W006 93
* 3.740	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Methylphenol	I/8n	v	D	ν.	Þ	*	n	v.	Ω	*0	Ω	ν,	Ω
4-Nitroaniline	l/gn	20	Ω	20	n	20	n	20	Ω	70	Ω	20	D
4-Nitrophenol	l/gn	20	Ω	20	n	20	D	20	n	20	n	20	D
Acenaphthene	ug/I	S	Ω	5	n	\$	D	\$	D	s.	Þ	S	D
Acenaphthylene	√gn	S	Ω	5	Ω	S	D	8	Ω	8	D	s	Ω
Anthracene	//gn	\$	D	5	Ω	\$	D	\$	Ω	5	ם	\$	Ω
Benzo(a)anthracene	l/gu	5	n	\$	n	S	D	5	D	S	Þ	s	Ω
Benzo(a)pyrene	ug/l	S	ົ	S	n	\$	n	\$	D	\$	D	S	n
Benzo(b)fluoranthene	l/gu	S	Ω	5	Ω	\$	D	5	D	\$	D	S	D
Benzo(ghi)perylene	Ng/I	S	n	s	n	\$	D	S	Ω	5	D	ĸ	ם
Benzo(k)fluoranthene	/gn	S	n	s	n	\$	Ω	5	n	\$	Þ	ĸ	ם
Butyl benzyl phthalate	l/gu	5	n	5	D	S	Ω	\$	n	S	Þ	ν,	ם
Chrysene	l/gu	S.	D	S	D	S	D	S	ח	8	Þ	8	ם
Di-n-butyl phthalate	l/gn	s	Ω	\$	D	***		09.0	•	S	D	\$	ם
Di-n-octyl phthalate	l/gu	~	ם	S	D	5	ם	S	ם	S	Þ	S	ם
Dibenzo(a,h)anthracene	l/gu	S	n	S	D	\$	Ω	S	Þ	s	Ω	8	ם
Dibenzofuran	l/gu	s	D	s	n	\$	Ω	s	Þ	\$	Ω	S	Þ
Diethyl phthalate	l/gu	5	D	08.0	_	7		0.80	0	\$	D	S	Þ
Dimethyl phthalate	/gn	5	ם	5	D	5	n	s	D	s	Ω	S	D
Fluoranthene	l/gu	\$	D	2	D	s	Ω	5	D	\$	n	S	D
Fluorene	l/gu	S	ם	S	n	\$	n	\$	D	s.	D	s	D
Hexachlorobenzene	∏/8n	5	Ω	s	D	5	n	s	D	S	Ω	S	Þ
Hexachlorobutadiene	l/gu	S	n	5	Ω	s	D	s	Þ	S	Ω	v	D
Hexachlorocyclopentadiene	l/gn	3	D	\$	Ω	s	D	s.	D	v	Ω	ν,	ם
Hexachloroethane	l/gn	ν.	Þ	\$	Ω	5	n	s	Ω	S	n	\$	n
Indeno(1,2,3-c,d)pyrene	l/gu	5	Ω	5	Ω	S	D	5	ם	\$	D	S	n
Isophorone	ηgη	S	ם	S	ם	v.	D	\$	ם	S	D	S	D
N-Nitrosodi-N-Propylamine	l/gu	s	Ω	\$	Ω	ν.	D	S	ם	s	ח	S	Ω
N-Nitrosodiphenylamine	ug/l	8	n	\$	D	ĸ	ם	5	D	S	D	S	Ω
Naphthalene	l/gu	\$	Ω	5	D	ĸ	Ω	8	Ω	S	D	S	Ω
Nitrobenzene	l/gu	5	Ω	S	ם	S	ם	\$	ם	ν,	ם	ς.	Ω
Pentachlorophenoi	l/gu	20	D	20	Ω	20	n	20	n	20	n	20	n
Phenanthrene	∏/Sn	S	Ω	<b>5</b> 0	n	S	Ω	S	Ω	S	D	\$	D
Phenol	l/gn	<b>v</b>	D	06.0	0	e		7		S	D	S	D
Pyrene	l/gu	S	ם	S	Ω	s.	D	S	Þ	\$	D	S	D
bis(2-Chloroethoxy)methane	lgn	2	Ω	S	D	S	D	νı	n	\$	D	\$	D

Appendix L - Surface Water Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

<b>90</b>	QUAL		<b>&gt;</b> #	3		>	>	0	Þ	D	ם	D	Ω	D	n	ם	n	ΩΓ	D	n	D	ם	n	D		Ω	n	Ωľ	Π	] =	· c	>		D
SW006 PC-TF4-SW006 07/30/93	RESULT		n <del>-</del>	•	. •	35	45	6.30	4		4	m	S	<b>∞</b>	10	4	15	7	7	0.20	0.20	18	35	ဗ	5.60	4	4	8	es.	4	7.20		1	0.25
\$00	QUAL	=	<b>~</b>	1	:	<b>&gt;</b> :	<b>&gt;</b> :	<b>&gt;</b> :	<b>&gt;</b> ;	<b>)</b>	<b>&gt;</b>	ם	ם	<b>&gt;</b>	ם ב	Þ	Þ	Þ	D	D	D	n	D	ם	ב	ב	n	ΩΓ	ц	n	· C	,	;	<b>5</b>
SW005 PC-TF4-SW005 07/30/93	RESULT	v	0.90		ž	ς <b>γ</b>	<del>.</del>	4 -		•••	4	<b>M</b>	<b>~</b>	••	01	4	15	7	7	0.20	0.20	18	35	m ·	m	4	4	m	e	4	5.90		į	0.25
7004	QUAL	=	•		ï	> =	<b>&gt;</b>	<b>&gt;</b>	) <b>:</b>	<b>:</b>	<b>)</b>	<b>&gt;</b> ;	<b>)</b>	<b>&gt;</b> :	<b>&gt;</b>	<b>5</b>	Þ	0	n	D	n	n	ם	D ;	<b>-</b>	Þ	D	ם	Π	C	0			
SW004 PC-TF4-SW004 07/28/93	RESULT	<b>~</b>	. <b>m</b>		35	Ç ¥	<b>;</b> •	t 4	• -		* (	ۍ ن	n	×	01	4	15	2.20	7	0.20	0.20	18	35	m (		4	4	<del>ღ</del>	e	17	11.40		6	8.5
903	QUAL	Ω			=	> =	•	I	) <b>=</b>	> =	> :	<b>:</b>	>	;	>	;	D	1	D :	<b>&gt;</b> ;	<b>&gt;</b>	0	<b>D</b> ;	3:	<b>&gt;</b> :	<b>)</b>	Þ	D	Π		0			
SW003 PC-TF4-SW003 07/28/93	RESULT	s	0.80		35	45	01 01	4	٠,	• •	٠,	חי	69 69	06.66	10	0.53	SI	4.20	7	0.20	0.20	21.90	35	<b>n</b> (	ο.	4.	4	m	က	20	8.70		040	2
200	QUAL	ם			œ	<b>=</b>	=	) D	Ξ	=	=	) <b>:</b>	> =	) <b>:</b>	9	a :	<b>&gt;</b> ;	<b>&gt;</b> ;	<b>&gt;</b> :	<b>&gt;</b> :	<b>&gt;</b> :	<b>&gt;</b> :	) :	1 :	<b>&gt;</b> ;	<b>;</b>	<b>)</b>	D ;	J D	0	0		F	<b>)</b>
SW002 PC-TF4-SW002 07/28/93	RESULT	s	0.60		26.60	45	4	4	_	4	۰,	v	n ox	÷ 5	2 4		<u>.</u>	7 (	7	0.20	07.0	18	, ,	n (1	۰ ۲		4 (	.n.	eo :	8.60	7.40		0.25	
<b>10</b> 00	QUAL	D			D	n	n	D	D	Ω	Ξ	· =	> <b>=</b>	· =	, E	3 =	<b>&gt;</b>	<b>&gt;</b>	<b>&gt;</b>	> =	> =	<b>&gt;</b> =	> =	) E	3 =	<b>&gt;</b> =	<b>&gt;</b> :	٠:	٦ أ	<b>-</b>	0		D	
SW001 PC-TF4-SW001 07/28/93	RESULT	\$	10		35	45	4	4	-	4	647		, oc	) <u>C</u>	4.60	15	; ;	٦ ,	000	0.20	07.0	10	£ 4	. "	4	• •	•	n (	n •	4	12.80		0.25	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	I/8n	l/gu		l/gu	l/gn	l/gn	I/gn	l/gu	l/gn	∐an	]/an	I/an		[/6n		(g)	1	1,61	1,61	78n 1001	l/Sh	1/611	. g⊥ no∖	1/011	Lon.	. ga	¥ ;	7 5 7 2 5 7 2 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Togn	I/gu		mg/l	
COLLEC	,	bis(2-Chloroethyl) ether	bis(2-Ethylhexyl)phthalate	METALS	Antimony	Antimony, Dissolved	Arsenic	Arsenic, Dissolved	Beryllium	Beryllium, Dissolved	Cadmium	Cadmium, Dissolved	Chromium	Chromium, Dissolved	Copper	Copper, Dissolved	Lead	Lead, Dissolved	Mercury	Mercury, Dissolved	Nickel	Nickel, Dissolved	Selenium	Selenium, Dissolved	Silver	Silver, Dissolved	Thallium	Thallinm Dissolved	Zinc Zinc	Zinc Mingles 4	Zilic, Dissolved	ТРН	Total Petroleum Hydrocarbons	

Appendix L - Surface Water Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

RESULT         QUAL         RESULT         QUAL         RESULT           0.35         U         0.35         U         0.40           0.40         U         0.40         U         0.40           0.40         U         0.40         U         0.40           0.25         U         0.25         U         0.25           0.35         U         0.35         U         0.35           0.30         U         0.35         U         0.35           0.30         U         0.30         U         0.20           0.30         U         0.20         U         0.20           0.25         U         0.20         U         0.20           0.25         U         0.25         U         0.25           0.25         U         0.25         U         0.25           0.25         U         0.25         U         0.25           0.28         U         0.	UNITS: RESULT QUAL	LOCATOR: SAMPLE ID: COLLECTION DATE:	LOCATOR: SAMPLE ID: TION DATE:	SW106 PC-TF4-SW106 07/30/93	v106 3	SW007 PC-TF4-SW007 07/30/93	3	SW008 PC-TF4-SW008 07/30/93	38 :W008 '93	:
ug/1 0.35 U 0.35 U 0.39 U 0.09 U 0.09 U 0.00	ug/1 0.35 U 0.35		UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	ÓΩ'	7
ng/l 0.35 U 0.35 U 0.35 U 0.35 U 0.35 U 0.35 U 0.40 U 0.40 U 0.40 U 0.40 U 0.40 U 0.40 U 0.35	ugf         0.35         U         0.35         U         0.35         U         0.35         U         0.35         U         0.35         U         0.40         U	hana	Ç.	0.35		<b>5</b> 10	•	0.3	<b>5</b> 2	מ
10	10	2		0.35		0.35	•	0.3	. <del>.</del> .	Þ
ug/l 0.25 U 0.25 U 0.29 U 0.29 ug/l 0.35 U 0.30 U 0	ug/l         0.25         U         0.35         U         0.30         U	iane	J/3n	0.40		0.40		9.0	2	D
ug/l         0.35         U         0.35         U           ug/l         0.35         U         0.35         U           ug/l         0.35         U         0.35         U           ug/l         0.33         U         0.35         U           ug/l         0.30         U         0.35         U           ug/l         0.30         U         0.20         U           ug/l         0.30         U         0.20         U           ug/l         0.40         U         0.20         U           ug/l         0.40         U         0.20         U           ug/l         0.40         U         0.40         U           ug/l         0.40         U         0.40         U           ug/l         0.40         U         0.25         U           ug/l         0.35         U         0.25         U           ug/l         0.35         U         0.35         U           ug/l         0.40         U         0.40         U           ug/l         0.35         U         0.35         U           ug/l         0.30         U	ug/l         0.35         U         0.30         U		)/gn	0.25		0.25		0.2	23	n
ugf1         0.35         U         0.35         U         0.35         U         0.05         U	ugft         0.35         U         0.30         U		l/au	0.35		0.35		0.3	55	n
ug/1         0.35         U         0.35         U           ug/1         0.35         U         0.35         U           ug/1         0.30         U         0.30         U           ug/1         0.30         U         0.25         U           ug/1         0.30         U         0.20         U           ug/1         0.20         U         0.20         U           ug/1         0.25         U         0.25         U           ug/1         0.25         U         0.25         U           ug/1         0.25         U         0.25         U           ug/1         0.26         U         0.25         U           ug/1         0.35         U         0.25         U           ug/1         0.36         U         0.26         U           ug/1         0.37         B         0.35         U           ug/1         0.30         U	ugfl         0.35         U         0.30         U		l/gn	0.35		0.35		0.3	35	Þ
ug/I         0.35         U         0.35         U           ug/I         0.30         U         0.30         U           ug/I         0.30         U         0.30         U           ug/I         0.30         U         0.25         U           ug/I         0.30         U         0.30         U           ug/I         0.20         U         0.20         U           ug/I         0.25         U         0.25         U           ug/I         0.25         U         0.25         U           ug/I         0.25         U         0.25         U           ug/I         0.40         U         0.40         U           ug/I         0.40         U         0.25         U           ug/I         0.25         U         0.25         U           ug/I         0.40         U         0.40         U           ug/I         0.40         U         0.25         U           ug/I         0.40         U         0.40         U           ug/I         0.30         U         0.50         U           ug/I         0.30         U	ugfl         0.35         U         0.30         U	•	ug/l	0.35		0.35		0.3	35	Þ
ugft         0.30         U         0.30         U           ugft         0.25         U         0.25         U           ugft         0.30         U         0.25         U           ugft         0.30         U         0.20         U           ugft         0.20         U         0.20         U           ugft         0.25         U         0.25         U           ugft         0.26         U         0.25         U           ugft         0.36         U         0.25         U           ugft         0.30         U         0.25         U           ugft         0.30         U         0.30         U           ugft         0.30         U         0.30         U           ugft         0.30         U	ug/I         0.30         U         0.25         U         0.20         U		1/gn	0.35		0.35		0.3	35	Þ
ugft         0.25         U         0.25         U           ugft         0.30         U         0.30         U           ugft         0.30         U         0.30         U           ugft         0.20         U         0.20         U           ugft         0.25         U         0.25         U           ugft         0.35         U         0.25         U           ugft         0.36         U         0.25         U           ugft         0.40         U         0.25         U           ugft         0.30         U         0.20         U           ugft         0.30         U         0.30         U           ugft         0.35         U         0.30         U           ugft         0.35         U	ug/I         0.25         U         0.30         U         0.20         U		1/an	0.3(		0.30		0.3	20	ם
ugf1         0.30         U         0.30         U           ugf1         0.30         U         0.30         U           ugf1         0.20         U         0.20         U           ugf1         0.20         U         0.20         U           ugf1         0.25         U         0.25         U           ugf1         0.25         U         0.20         U           ugf1         0.25         U         0.25         U           ugf1         0.25         U         0.25         U           ugf1         0.40         U         0.40         U           ugf1         0.45         U         0.25         U           ugf1         0.50         U         0.25         U           ugf1         0.40         U         0.40         U           ugf1         0.30         U         0.30         U           ugf1         0.30         U         0.30         U           ugf1         0.35         U         0.30         U           ugf1         0.35         U         0.30         U           ugf1         0.35         U	ugf1         0.30         U         0.20         U		l/gn	0.2		0.25		0.0	22	D
ugf1         0.30         U         0.30         U           ugf1         0.20         U         0.20         U           ugf1         0.20         U         0.20         U           ugf1         0.25         U         0.25         U           ugf1         0.26         U         0.20         U           ugf1         0.25         U         0.25         U           ugf1         0.35         U         0.25         U           ugf1         0.40         U         0.40         U           ugf1         0.40         U         0.40         U           ugf1         0.50         U         0.25         U           ugf1         0.50         U         0.50         U           ugf1         0.50         U         0.50         U           ugf1         0.40         U         0.40         U           ugf1         0.30         U         0.50         U           ugf1         0.30         U         0.40         U           ugf1         0.30         U         0.30         U           ugf1         1.20         0.30	ugf1         0.30         U         0.20         U		ug/l	0.3		0.30		0	93	ם
ugf1         0.20         U         0.20         U           ugf1         0.30         U         0.20         U           ugf1         0.25         U         0.25         U           ugf1         0.20         U         0.20         U           ugf1         0.25         U         0.25         U           ugf1         0.25         U         0.25         U           ugf1         0.25         U         0.25         U           ugf1         0.35         U         0.35         U           ugf1         0.36         U         0.35         U           ugf1         0.37         B         0.15         B           ugf1         0.30         U         0.30         U           ugf1         0.35         U         0.30         U           ugf1         0.35         U         0.30         U           ugf1         0.35         U	ugf1         0.20         U	rlene	1/Zn	0.3(		0.30	•	0	30	Þ
ug/I         0.30         U         0.05         U           ug/I         0.25         U         0.25         U           ug/I         0.40         U         0.20         U           ug/I         0.40         U         0.25         U           ug/I         0.25         U         0.25         U           ug/I         0.40         U         0.25         U           ug/I         0.40         U         0.40         U           ug/I         0.35         U         0.25         U           ug/I         0.35         U         0.35         U           ug/I         0.35         U         0.35         U           ug/I         0.40         U         0.40         U           ug/I         0.30         U         0.30         U           ug/I         0.30         U         0.30         U           ug/I         0.30         U         0.30         U           ug/I         0.35         U         0.30         U           ug/I         0.35         U         0.30         U           ug/I         0.35         U	ug/I         0.30         U         0.35         U         0.30         U           ug/I         0.25         U         0.25         U         0.25         U         0.25           ug/I         0.40         U         0.40         U         0.40         U         0.25		l/gu	0.20	-	0.20		0.	20	Þ
ugrl         0.25         U         0.25         U           ugrl         0.20         U         0.20         U           ugrl         0.40         U         0.20         U           ugrl         0.25         U         0.25         U           ugrl         0.35         U         0.35         U           ugrl         0.40         U         0.40         U           ugrl         0.50         U         0.50         U           ugrl         0.35         U         0.35         U           ugrl         0.35         U         0.35         U           ugrl         0.35         U         0.35         U           ugrl         0.40         U         0.40         U           ugrl         0.35         U         0.35         U           ugrl         0.37         B         0.15         B           ugrl         0.30         U         0.30         U           ugrl         1.20         U         0.30         U           ugrl         0.35         U         0.30         U           ugrl         0.55         U	ug/I         0.25         U         0.25         U         0.25         U         0.25         U         0.25         U         0.25         U         0.20         U         0.25         U	dene	l/gn	0.3		0.3(		0	30	Þ
ugft         0.20         U         0.20         U           ugft         0.40         U         0.40         U           ugft         0.25         U         0.25         U           ugft         0.35         U         0.35         U           ugft         0.25         U         0.25         U           ugft         0.40         U         0.40         U           ugft         0.50         U         0.50         U           ugft         0.35         U         0.35         U           ugft         0.30         U         0.40         U           ugft         0.37         B         0.15         B           ugft         0.30         U         0.30         U           ugft         0.35         U         0.30         U           ugft         0.35         U         0.30         U           ugft         0.55         U	ug/l       0.20       U       0.40       U       0.40       U       0.40       U       0.25       U       0.35       U       0.35       U       0.35       U       0.35       U       0.35       U       0.40       U       <	pylene	/Jan	0.2		0.25		0	52	D
ug/1 0.40 U 0.40 U 0.40 U ug/1 0.25 U	ug/I         0.40         U         0.25         U		Van	0.2	_	0.20		0	ಜ	Þ
ug/l 0.25 U 0.25 U 0.25 U ug/l 0.35 U	ug/l       0.25       U       0.25       U       0.25       U       0.25       U       0.25       U       0.25       U       0.35       U       0.25       U       0.35       U       0.30       U       0.49       U       <	her	l/gu	4.0		0.4		ò	6	<b>⊃</b>
ug/l 0.35 U 0.35 U ug/l 0.85 U 0.85 U ug/l 0.25 U 0.85 U ug/l 0.40 U 0.25 U ug/l 0.50 U 0.50 U ug/l 0.35 U 0.50 U ug/l 0.35 U 0.35 U ug/l 0.30 U 0.30 U ug/l 0.30 U 0.40 U ug/l 0.30 U 0.40 U ug/l 0.30 U 0.40 U ug/l 0.30 U 0.30 U	ug/l     0.35     U     0.35     U     0.35       ug/l     0.85     U     0.85     U     0.85       ug/l     0.25     U     0.25     U     0.25       ug/l     0.40     U     0.40     U     0.40       ug/l     0.35     U     0.50     U     0.50       ug/l     0.35     U     0.35     U     0.35       ug/l     0.40     U     0.40     U     0.40       ug/l     0.30     U     0.40     U     0.40       ug/l     0.30     U     0.30     U     0.30       ug/l     0.30     U     0.30     U     0.30       ug/l     0.30     U     0.30     U     0.30       ug/l     0.35     U     0.30     U     0.30       ug/l     0.55     U     0.55     U     0.55		ug/l	0.2	S C	0.5		0	25	Þ
ug/l 0.85 U 0.85 U ug/l 0.25 U 0.40 U 0.40 U 0.40 U 0.40 U 0.40 U 0.35 U 0.35 U 0.35 U 0.35 U 0.35 U 0.35 U 0.36 U 0.30 U 0.35 U	ug/l         0.85         U         0.25         U         0.40         U         0.40         U         0.40         U         0.40         U         0.40         U         0.25         U		l/gu	0.3		0.3		0	35	כ
ug/1 0.25 U 0.25 U ug/1 0.40 U 0.40 U ug/1 0.50 U 0.50 U ug/1 0.35 U 0.35 U ug/1 0.35 U 0.35 U ug/1 0.28 U 0.35 U ug/1 0.28 U 0.29 B ug/1 0.40 U 0.40 U ug/1 0.50 U 0.40 U ug/1 0.50 U 0.45 U ug/1 0.30 U 0.45 U ug/1 0.30 U 0.30 U ug/1 0.30 U 0.30 U ug/1 0.30 U 0.30 U	ug/l 0.25 U 0.25 U 0.25 U 0.25 U 0.25 U 0.25 U 0.40 U 0.25 U 0.20 U 0.20 U 0.20 U 0.20 U 0.40 U 0.45 U 0.45 U 0.20 U 0.25 U 0.25 U 0.25 U 0.25 U 0.25		l/gu	8.0	-	8.0		0	85	ם
ug/1 0.40 U 0.40 U u u/0 u/0 u/0 u/0 u/0 u/0 u/0 u/0 u/0 u	ug/1 0.40 U 0.40 U 0.40 U 0.40 U 0.40 U 0.40 U 0.50 U 0.50 U 0.55 U 0.35 U 0.30 U 0.30 U 0.40 U 0.45 U 0.45 U 0.30 U 0.35 U 0.55 U 0.55		√gn	0.2		0.2		0.	22	D
ug/1 0.50 U 0.50 U ug/1 0.35 U 0.35 U ug/1 0.35 U 0.35 U ug/1 0.35 U 0.35 U ug/1 0.50 U 0.50 U ug/1 0.30 U 0.30 U ug/1 0.40 U 0.40 U ug/1 0.50 U 0.50 U ug/1 0.50 U 0.50 U ug/1 0.30 U 0.30 U ug/1 1.20 0.30 U	ug/1 0.50 U 0.50 U 0.50 U 0.50 u 0.50 u 0.35 U 0.30 U 0.35 U 0.35 U 0.35 U 0.35 U 0.35 U 0.35	2	l/gn	4.0		0.4		0.	40	Þ
ug/l 0.35 U 0.35 U ug/l 0.35 U 0.35 U ug/l 0.50 U 0.35 U ug/l 0.20 U 0.20 B ug/l 0.40 U 0.40 U ug/l 0.45 U 0.40 U ug/l 0.50 U 0.50 U ug/l 0.30 U 0.50 U ug/l 0.30 U 0.50 U ug/l 0.30 U 0.30 U ug/l 0.30 U 0.30 U ug/l 0.30 U 0.30 U	ugfi 0.35 U 0.35 U 0.35  ugfi 0.35 U 0.35 U 0.35  ugfi 0.28 U 0.50 U 0.50  ugfi 0.28 U 0.29 B 0.49  ugfi 0.40 U 0.40 U 0.40  ugfi 0.45 U 0.45 U 0.45  ugfi 0.30 U 0.50 U 0.45  ugfi 0.30 U 0.50 U 0.50  ugfi 0.30 U 0.50 U 0.50  ugfi 0.30 U 0.30 U 0.30  ugfi 0.30 U 0.30 U 0.30  ugfi 0.30 U 0.30 U 0.30  ugfi 0.30 U 0.30  ugfi 0.30 U 0.30  ugfi 0.30 U 0.30		l/gu	0.5		0.5		0	20	ם
ug/l 0.35 U 0.35 U 0.35 U ug/l 0.50 U 0.30 U 0.40 U 0.45 U 0.45 U 0.45 U 0.45 U 0.45 U 0.45 U 0.50 U 0.50 U 0.50 U 0.50 U 0.30 U 0.30 U 0.30 U 0.30 U 0.30 U 0.55 U 0.55 U	ug/l 0.35 U 0.30 u 0.30 u 0.30 u 0.30 u 0.30 u 0.30 u 0.35		1/8n	0.3		0.3	-	O	35	Þ
ug/l 0.50 U 0.50 U ug/l 0.28 0.29 B ug/l 0.30 U 0.29 B ug/l 0.40 U 0.40 U ug/l 0.45 U 0.45 U ug/l 0.50 U 0.50 U ug/l 0.30 U 0.50 U ug/l 0.30 U 0.30 U ug/l 0.30 U 0.30 U	ug/l 0.50 U 0.50 U 0.50  ug/l 0.28 0.29 B 0.49  ug/l 0.30 U 0.30 U 0.30  ug/l 0.40 U 0.40 U 0.40  ug/l 0.45 U 0.45 U 0.45  ug/l 0.50 U 0.50 U 0.50  ug/l 0.30 U 0.30 U 0.30  ug/l 1.20 0.30 U 0.30  ug/l 0.35 U 0.35 U 0.30		∥⁄an	0.3		0.3	_	·o	35	Þ
ug/l 0.28 0.29 B ug/l 0.30 U 0.30 U ug/l 0.40 U 0.40 U ug/l 0.45 U 0.45 U ug/l 0.50 U 0.50 U ug/l 0.30 U 0.50 U ug/l 0.30 U 0.30 U ug/l 1.20 0.30 U	ug/l 0.28 0.29 B 0.49 ug/l 0.30 U 0.30 U 0.30 ug/l 0.40 U 0.40 U 0.40 ug/l 0.45 U 0.45 U 0.45 ug/l 0.50 U 0.50 U 0.50 ug/l 0.37 B 0.15 B 0.34 ug/l 1.20 0.30 U 0.30 ug/l 0.35 U 0.35 U 0.30		l/gu	0.5		0.5	_	o.	20	>
ug/l 0.30 U 0.30 U 0.30 U ug/l 0.40 U 0.50 U 0.55 U 0.30 U 0.30 U 0.55 U 0.55 U 0.55 U	ug/l 0.30 U 0.30 U 0.30 U 0.30 ug/l 0.40 U 0.50 U 0.50 U 0.50 U 0.50 U 0.50 U 0.30 U 0		1/8n	0.2	œ	0.2		Ö	49	
ug/l 0.40 U 0.40 U 0.40 U ug/l 0.45 U 0.37 B 0.15 B 0.15 B ug/l 1.20 U 0.30 U 0.35 U 0.55 U	ug/l 0.40 U 0.40 U 0.40 U 0.40 U 0.40 ug/l 0.45 U 0.50 U 0.55 U 0.55 U 0.55 U 0.55	2	l/gn	0.3		0.3		Ö	30	Þ
0.45 U 0.45 U 0.50 U 0.50 U 0.37 B 0.15 B 0.30 U 0.30 U 1.20 0.30 U	0.45 U 0.45 U 0.45 U 0.45 O 0.50 U 0.50 U 0.50 U 0.50 U 0.50 U 0.50 U 0.30 U 0.34 0.30 U 0.30		l/gn	0.6		4.0		Ó	.40	D
0.50 U 0.50 U 0.37 B 0.15 B 0.30 U 0.30 U 1.20 0.30 U	0.50 U 0.50 U 0.50 0.37 B 0.15 B 0.34 0.30 U 0.30 U 0.30 1.20 0.30 U 0.10 0.55 U 0.55		1/an	0.4		4.0		Ó	.45	ב
0.37 B 0.15 B 0.30 U 0.30 U 1.20 0.30 U 0.55 U 0.55 U	0.37 B 0.15 B 0.34 0.30 U 0.30 U 0.30 1.20 0.30 U 0.30 0.55 U 0.55		1/on	0.5		0.5		0	.50	Þ
0.30 U 0.30 U 1.20 0.30 U 0.55 U 0.55 U	0.30 U 0.30 U 0.30 1.20 0.30 U 0.10 0.55 U 0.55 U 0.55		Van	0.3		0.1		0	.34	8
1.20 0.30 U 0.55 U 0.55 U	1.20 0.30 U 0.10 0.55 U 0.55 U 0.55		, <b>/</b> 411	0.3		0.3		0	.30	⊃
0.55 U 0.55 U	0.55 U 0.55 U 0.55		You.			0.3		0	.10	
			ue/I	0.0		0.5		0	.55	O
			<b>)</b>							

Appendix L - Surface Water Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

1008	QUAL				D	Þ	Ω									D	ם	n	ם	Ω	ם	D	ם	n	D	Þ	n	Ω	n	ם	ם	ם	n	<b>=</b>	<b>:</b>	<b>&gt;</b> :	<b>-</b>	Þ		
SW008 PC-TF4-SW008 07/30/93	RESULT		0.15	0.20	0.20	0.50	0.15	0.35	0.25	0.20		0.25	0.25			'n	\$	20	S	S	S	20	ς.	8	, <b>v</b> o	S	20	\$	8	70	v	, vo	02	3 *	· •	n v	'n	2		
207	QUAL		Þ	ם	ם	n	D	=	=	· =	) <b>=</b>	=	) <b>=</b>	ı		n	n	Þ	n	'n	Ω	n	Þ	n	ם מ	D	Ω	D	n	n	=	) <b>=</b>	=	<b>-</b>	<b>&gt;</b> :	D :	<b>-</b>	D		
SW007 PC-TF4-SW007 07/30/93	RESULT		0.15	0.20	0.20	0.50	0.15	0.35	20.0	02.0	4	30.0	0.25			5	ς.	20	ν:	, vo	v	<sub>20</sub>	v:	, <b>v</b>	, <b>v</b>	ı v	20	, v	· •	20	•	· •	, د	3, 4	'n,	<b>v</b>	S	\$		
90	QUAL		_	D	n	Ω	=	=	<b>=</b>	> =	<b>:</b>	> =	<b>=</b>	)		ח	n	n	=	=	=	=	· =	=	=	=	=	=	=	=	) <b>=</b>	<b>=</b>	) <b>:</b>	<b>)</b>	>	D	D	Ω		
SW106 PC-TF4-SW106 07/30/93	RESULT		_	0.20	0.20	0.50	0.15	36.0	30.0	6.0	0.40	ر مرد	0.25	( ) ·		S	<b>S</b>	70	, v	, <b>v</b>	, v	, c	, v	· •	<b>,</b>	•	, 5	3 4	, <b>v</b>	ر د	3 4	o <b>v</b>	7 6	3 ,	'n	<b>S</b>				
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:		/an	l/an	Voll	Los.	, g.,	ng.i	ng/i	ı,gn	- 18n	ugu K	I/gn	י גאלי		ng/l	Ziii	(A)	, T	T K	. to	,		X :	T/Xn	,	. Kg.:	i je	) 2 3	, (k	1 X	i gi	, 1	∫gu	l/gu	ug/l	1/gn	l/gu		
S		8020	1 2-Dichlorohenzene	1.3 Dimethylhanzene	1,2-Diment production	1,3-Dicinologonizana	1,3/1,+DimeniyBenzene	I,4-Dichlorobenzene	Benzene	Chlorobenzene	Ethylbenzene	Methyl-t-Butyl Ether	Styrene	Toluene	IORNA	1.7.4-Trichlorohenzene	1,2,7 Illimited Chlomoropane)	7.4 C. Teichlomehanol	2,4,5+1 nemorophemor	2,4,5-1 richlorophenol	2,4-Diemotophenoi	2,4-Dimemylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphunalene	2-Chiorophenol	2-Methyl-4,0-Dinitrophenol	2-Methyinaphinaiene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	4-Bromophenyl phenyl ether	4-Chloro-3-methyl phenol	4-Chloroaniline	4-Chlorophenyl phenyl ether		

Appendix L - Surface Water Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

LOCATOR: SAMPLE ID: COLLECTION DATE:	LOCATOR: SAMPLE ID: TION DATE:	SW106 PC-TF4-SW106 07/30/93	6 W106 93	SW007 PC-TF4-SW007 07/30/93	7 W007 33	SW008 PC-TF4-SW008 07/30/93	8 W008 33
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Methylphenol	J/8n	. N	D	\$	n	\$	D
4-Nitroaniline	l/gu	20	n	20	n	20	n
4-Nitrophenol	l/gn	20	Þ	20	Ω	20	D
Acenaphthene	l/gu	S	n	5	Ω	s.	D
Acenaphthylene	l/gu	5	Ω	5	D	5	D
Anthracene	I/gn	\$	n	\$	Ω	5	Ω
Benzo(a)anthracene	l/gn	\$	Ω	s	D	5	Ω
Benzo(a)pyrene	l/gn	\$	n	5	n	\$	Ω
Benzo(b)fluoranthene	l/gn	5	n	\$	D	5	Ω
Benzo(ghi)perylene	l/gu ∵	\$	n	\$	D	5	n
Benzo(k)fluoranthene	l/gu	5	Ω	\$	Ω	S	ם
Butyl benzyl phthalate	l/gn	8	Þ	νς	Ω	\$	D
Chrysene	l/gn	\$	n	\$	D	80	D
Di-n-butyl phthalate	l/gu	5	Ω	\$	n	5	D
Di-n-octyl phthalate	1/gn	5	D	5	n	5	D
Dibenzo(a,h)anthracene	∏an	5	D	5	Þ	5	n
Dibenzofuran	l/gu	5	D	s	Ω	5	ם
Diethyl phthalate	1/gn	S	n	0.50	0	5	ם
Dimethyl phthalate	ug/1	5	D	5	n	5	ם
Fluoranthene	ng/l	5	n	5	D	5	Þ
Fluorene	l/gu	S	n	<b>ν</b>	D	5	ם
Hexachlorobenzene	l/gu	'n	D	5	D	S	Þ
Hexachlorobutadiene	l/gn	S	Ω	S	Þ	S	D
Hexachlorocyclopentadiene	1/gn	5	ם	5	D	5	n
Hexachloroethane	1/gn	S	n	ĸ	n	5	Ω
Indeno(1,2,3~c,d)pyrene	1/gn	8	D	S	Þ	S	Ω
Isophorone	∏gn	S	Ω	S	Ω	5	D
N-Nitrosodi-N-Propylamine	I/gu	5	ם	ς.	n	S	n
N-Nitrosodiphenylamine	l/gn	S	ם	5	D	3.	n
Naphthalene	l/gu	8	ם	5	n	5	n
Nitrobenzene	1/gn	S	מ	3	Ω	S	Ď
Pentachlorophenol	l/gu	20	D	20	Ω	20	D
Phenanthrene	l/gn	S	O	S	n	\$	Ω
Phenol	l/gu	2	D	\$	Ω	0.50	0
Pyrene	l/gu	5	ņ	5	n	S	Ω
bis(2-Chloroethoxy)methane	1/gn	5	D	5	D	s	Ω

Appendix L - Surface Water Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

U 5 U		45 t	4 4 D D	1 O	4 U	3 C			<del>0</del>			2		ם:	o :	<b>&gt;</b> =	ם ס	n	n	d C	o ·	0	0 S	
В					4	m v	- ∞	10	5.40	51	~ ~	20	0										100	
	æ	<b>D</b> :										4 C	0.20	<u>8</u>	33	w c	J 4	4	3	<b>e</b>	4	v,	0.25	
			9 9	) D	n	ם ב	<b>&gt;</b> =	n	D	D .	<b>&gt;</b> :	<b>&gt;</b> =	Ò	n	<b>&gt;</b>	<b>&gt;</b> :	<b>&gt;</b> =	ם	n	ΩΓ	D	0	D	
2 5	56.50	45	4 4		4	m v	n oc	10	4	15	7 6	2000	0.20	18	35	m r	v 4	4	3	8	4	7.30	0.25	
םם	Þ	D	00	> <b>&gt;</b>	D	<b>&gt;</b> :	<b>)</b> =	ם	n	D	: כ	<b>&gt;</b> =	ככ	n	Þ	<b>&gt;</b> :	<b>-</b>	Þ	ח	ΩΓ	D	0	D	
82 <b>8</b> 2	35	45	5.30	2 <del>f</del> -	4	en v	n ox	° 2	4	15	7	2000	0.20	18	35	m (	~ √	- 4	ю	E	4	6.70	0.25	
l/Sn 1/Sn	l/au	l/gu	l/gu //~	ug/. ug/1	l/gu	ľgn –	1/gn 1/2::	1,80 1/80	l/gu	Ngu .	l/gn	1/gn 1/2:-	1/8n 1/8n	_g. ∥gn	// ng/l	l/8n	l/gu	i oi	∬an ∏	I/gu	l/gu	ng/I	l/gm s	
bis(2-Chloroethyl) ether bis(2-Ethylhexyl)phthalate	METALS Antimony	Antimony, Dissolved	Arsenic	Arsenic, Dissolved Rerollium	Beryllium, Dissolved	Cadmium	Cadmium, Dissolved	Chromium Dissolved	Copper	Copper, Dissolved	Lead	Lead, Dissolved	Mercury Mercury Dissolved	Nickel	Nickel, Dissolved	Selenium	Sefenium, Dissolved	Silver Silvar Dissolvad	Thallium	Thallium, Dissolved	Zinc	Zinc, Dissolved	TPH Total Petroleum Hydrocarbons	
ug/l 5 U	ug/i 5 U	ugit 5 U	ug/l 35 U 2 ug/l 35 U 56.50 ug/l 45 U 45	ug/l 5 U 2  ug/l 35 U 56.50  ug/l 45 U 45  ug/l 5.30 0 4	ug/l 5 U 2  ug/l 35 U 56.50  ug/l 45 U 45  ug/l 4.40 0 4  ug/l 1 U 1	ugil 5 U 2  ugil 45 U 45  ugil 440 0 4  ugil 1 U 1  ugil 4 U 4	ug/l 5 U 2  ug/l 35 U 56.50  ug/l 45 U 45  ug/l 5.30 0 4  ug/l 1 U 1  ug/l 1 U 1  ug/l 3 U 3	ug/l 5 U 2  ug/l 35 U 56.50  ug/l 45 U 45  ug/l 5.30 0 4  ug/l 1 U 1  ug/l 1 U 1  ug/l 3 U 5	ug/l 5 U 2  ug/l 35 U 56.50  ug/l 45 U 45  ug/l 5.30 0 4  ug/l 1 U 1  ug/l 4 U 4  ug/l 3 U 3  ug/l 8 U 8  ug/l 10 U 10	ug/l 5 U 2  ug/l 35 U 56.50  ug/l 45 U 45  ug/l 1 U 1  ug/l 44 U 44  ug/l 3 U 3  ug/l 1 0 U 10  ug/l 1 0 U 10	ug/l 35 U 56.50  ug/l 45 U 45.50  ug/l 5.30 0 4  ug/l 1 U 1 1  ug/l 3 U 3  ug/l 3 U 3  ug/l 8 U 8  ug/l 10 U 10  ug/l 15 U 15	ug/l 5 U 2  ug/l 35 U 56.50  ug/l 45 U 45  ug/l 5.30 0 4  ug/l 1 U 1  ug/l 4 U 4  ug/l 3 U 3  ug/l 5 U 55  ug/l 4 U 4  ug/l 5 U 55  ug/l 4 U 4  ug/l 5 U 55  ug/l 4 U 4  ug/l 5 U 55  ug/l 10 U 10  ug/l 15  ug/l 15  ug/l 15	ug/l 5 U 2  ug/l 35 U 56.50  ug/l 45 U 45  ug/l 5.30 0 4  ug/l 1 U 1  ug/l 4 U 4  ug/l 3 U 3  ug/l 3 U 3  ug/l 5 U 5  ug/l 6 U 10  ug/l 10 U 10  ug/l 10 U 10  ug/l 15 U 15  ug/l 2 U 2  ug/l 2 U 2	ug/l 5 U 2  ug/l 35 U 56.50  ug/l 45 U 45  ug/l 5.30 0 4  ug/l 1 U 11  ug/l 4 U 4  ug/l 3 U 3  ug/l 5 U 55  ug/l 10 U 10  ug/l 8 U 8  ug/l 10 U 10  ug/l 15 U 15  ug/l 2 U 2  ug/l 2 U 2  ug/l 2 U 0.20  ug/l 0.20 U 0.20	ug/l 5 U 2  ug/l 35 U 56.50  ug/l 45 U 45  ug/l 1 U 1  ug/l 3 U 45  ug/l 1 U 1  ug/l 3 U 3  ug/l 3 U 3  ug/l 10 U 10  ug/l 10 U 10  ug/l 15 U 2  ug/l 2 U 2  ug/l 2 U 2  ug/l 18 U 18  ug/l 18 U 0  ug/l	ug/l 5 U 2  ug/l 35 U 56.50  ug/l 440 0 44  ug/l 1 U 1 1  ug/l 3 U 45  ug/l 3 U 44  ug/l 3 U 3  ug/l 10 U 10  ug/l 15 U 15  ug/l 2 U 2  ug/l 35  ug/l 35  ug/l 37 U 35	ug/l 5 U 2  ug/l 35 U 56.50  ug/l 45 U 45  ug/l 1 U 1  ug/l 3 U 3  ug/l 3 U 3  ug/l 1 0 U 10  ug/l 16 U 16  ug/l 16 U 16  ug/l 17 U 16  ug/l 2 U 2  ug/l 15 U 2  ug/l 15 U 2  ug/l 0.20 U 0.20  ug/l 33 U 33  ug/l 15 U 16  ug/l 15 U 2  ug/l 0.20 U 0.20  ug/l 33 U 33  ug/l 33 U 33  ug/l 33 U 33  ug/l 33 U 33	ug/l 5 U 2  ug/l 35 U 56.50  ug/l 45 U 45  ug/l 1 U 1  ug/l 3 U 3  ug/l 10 U 10  ug/l 15 U 2  ug/l 2 U 2  ug/l 2 U 2  ug/l 10 U 0.20  ug/l 2 U 2  ug/l 10 U 0.20  ug/l 3 U 33  ug/l 3 U 33  ug/l 3 U 33  ug/l 3 U 33  ug/l 3 U 33	ug/l 35 U 2 2 1 2 2 2 2 2 2 35.50 2 3 3 5 U 45 U 45 U 45 U 45 U 45 U 45 U 4	ug/l 35 U 56.50 ug/l 45 U 45 ug/l 4.40 U 44 ug/l 1 U 11 ug/l 3 U 56.50 ug/l 1 U 11 ug/l 3 U 55 ug/l 3 U 55 ug/l 10 U 10 ug/l 15 U 55 ug/l 15 U 15 ug/l 15 U 15 ug/l 2 U 2 ug/l 15 U 15 ug/l 15 U 15 ug/l 2 U 2 ug/l 35 U 6.20 ug/l 3 U 6.20 ug/l 3 U 33 ug/l 3 U 4	ug/l 5 U 2  ug/l 45 U 45  ug/l 5.30 U 45  ug/l 1 U 1 1  ug/l 3 U 5  ug/l 3 U 6  ug/l 3 U 6  ug/l 10 U 10  ug/l 15 U 6  ug/l 15 U 6  ug/l 15 U 6  ug/l 15 U 6  ug/l 2 U 6  ug/l 15 U 6  ug/l 15 U 6  ug/l 2 U 6  ug/l 2 U 6  ug/l 18 U 18  ug/l 3 U 63  ug/l 3 U 63  ug/l 3 U 63  ug/l 18 U 18  ug/l 18 U 18  ug/l 3 U 63  ug/l 3 U 63  ug/l 3 U 33  ug/l 3 U 33	ug/l 35 U 56.50  ug/l 45 U 45  ug/l 5.30 U 45  ug/l 1 U 1 U 1  ug/l 3 U 3  ug/l 3 U 3  ug/l 3 U 3  ug/l 10 U 10  ug/l 15 U 2  ug/l 15 U 2  ug/l 2 U 2  ug/l 15 U 15  ug/l 15 U 15  ug/l 2 U 2  ug/l 3 U 33  ug/l 4 U 4  ug/l 4 U 4  ug/l 3 U 3  ug/l 3 U 3  ug/l 4 U 4  ug/l 4 U 4  ug/l 4 U 4  ug/l 3 U 3  ug/l 4 U 4  ug/l 6 U 4  ug/l 7 U 4  ug/l 6 U 4  ug/l 6 U 4  ug/l 6 U 4  ug/l 7 U 4  ug/l 6 U 4  ug/l 6 U 4  ug/l 6 U 4  ug/l 6 U 4  ug/l 7 U 4  ug/l 6 U 4  ug/l 6 U 4  ug/l 7 U 4  ug/l 6 U 4  ug/l 6 U 4  ug/l 7 U 4  ug/l 7 U 4  ug/l 7 U 4  ug/l 6 U 4  ug/l 7 U 4	ug/l 35 U 56.50  ug/l 45 U 45  ug/l 5.30 0 4  ug/l 1 U 1  ug/l 3 U 45  ug/l 1 U 1  ug/l 3 U 3  ug/l 1 U 1  ug/l 1 U 1  ug/l 1 U 1  ug/l 3 U 3  ug/l 1 U 1  ug/l 2 U 2  ug/l 1 2 U 2  ug/l 1 1 U 1  ug/l 1 1 U 1  ug/l 1 1 U 1  ug/l 2 U 2  ug/l 2 U 2  ug/l 3 U 33  ug/l 33 U 33  ug/l 33 U 33  ug/l 3 U 33  ug/l 3 U 4  ug/l 4 U 4  ug/l 3 U 3  ug/l 3 U 3  ug/l 4 U 4  ug/l 4 U 4  ug/l 1 3 UL 4  ug/l 6.70 0 7.30	ug/l 35 U 56.50 II  ug/l 45 U 45 U 45 U  ug/l 1 1 U 11 U  ug/l 1 1 U 11 U  ug/l 3 U 3 6.50 II  ug/l 1 1 U 1 1 U  ug/l 3 U 3 II  ug/l 1 1 U 1 II  ug/l 1 1 U 1 II  ug/l 1 1 U 1 II  ug/l 1 2 U 5 II  ug/l 1 2 U 5 II  ug/l 1 2 U 5 II  ug/l 1 3 U 1 II  ug/l 1 3 U 3 II  ug/l 3 U 4 U 4  ug/l 3 U 3 II  ug/l 3 U 3 II  ug/l 3 U 3 II  ug/l 3 U 4 U 4  ug/l 3 U 3 II  ug/l 3 U 3 II  ug/l 4 U 4  ug/l 3 U 3 II  ug/l 3 U 3 II  ug/l 3 U 3 II  ug/l 4 U 4  ug/l 3 U 3 II  ug/l 3 U 3 II  ug/l 4 U 4  ug/l 4 U 4  ug/l 3 U 3 II  ug/l 3 U 3 II  ug/l 4 U 4  ug/l 6.70 U 7.30

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

MW6 MW11 PC-PI-MW6-GW4 PC-PI-MW11-GW4 09/15/93 09/14/93	RESULT QUAL RESULT QUAL		0.35 U 0.35 U	0.14 0.35 U	0.40 U 0.40 U	U 0.25	0.35 U 0.35 U	0.35 U 0.35 U	0.35 U 0.35 U	0.35 U 0.35 U	Ω	n	U 0.30	U 0.30	U 0.20	O:30	U 0.25	D	n	Ω		Ω	n	U 0.40	Ω	ם	0.35	U 0.50		U 0.30	n	Ω	Ω	0.40 B 0.34 B	Ω	Ω	
MW4 PC-PI-MW4-GW4 I	RESULT QUAL		0.35 U	0.35 U	0.40 U	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	_	0.25 U	0.30 U			0.30 U	0.25 U	0.20 U	0.40 U	0.25 U	0.35 U	0.85 U	0.25 U			0.35 U			0.35 U		0.40 U	0.45 U	0.50 U	0.37 B	0.30 U	0.30 U	11 930
MW3 PC-P1-MW3-GW4 09/10/93	RESULT QUAL		0.35 U	0.35 U	0.40 U	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U		0.25 U	0.30 U	0.30 U		0.30 U				0.25 U								0.50 U	0.17	0.30 U	0.40 U	0.45 U	0.50 U	0.42	0.30 U	0.30 U	
MW2 PC-PI-MW2-GW4 09/09/93	RESULT QUAL		0.35 U	0.35 U	0.40 U	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U		0.25 U	0.30 U	0.30 U		0.30 U			0.40 U										0.35 U	0.30 U	0.40 U		0.50 U	0.36	0.30 U		
MW1 PC-P1-MW1-GW4 09/15/93	RESULT QUAL		0.35 U	0.35 U	0.40 U	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	0.30 U	0.25 U	0.30 U	0.30 U	0.20 U	0.30 U	0.25 U	0.20 U	0.40 U	0.25 U	0.35 U	0.85 U	0.25 U	0.40 U	0.50 U	0.35 U	0.35 U	0.50 U	0.35 U	0.30 U	0.40 U	0.45 U	0.50 U	0.42 B	0.30 U		***
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS	8010	1,1,1,2-Tetrachloroethane ug/l		lane		.1-Dichloroethane ug/l	,1-Dichloroethylene	,2,3-Trichloropropane ug/l		,2-Dichlorobenzene ug/l	,2-Dichloroethane ug/l	.,2-Dichloropropane ug/l	,2-trans-Dichloroethylene ug/1	,3-Dichlorobenzene ug/l	,3-cis-Dichloropropylene ug/l	,3-trans-Dichloropropylene ug/l	,4-Dichlorobenzene ug/l	2-Chloroethylvinyl ether ug/l		4-Chlorotoluene ug/l		Bromochloromethane ug/l	Bromodichloromethane ug/l		Carbon Tetrachloride ug/l	Chlorobenzene ug/l	Chloroethane ug/l	Chloroform ug/l	Dibromochloromethane ug/l	Dibromomethane ug/l	Methyl bromide ug/l	Methyl chloride ug/I	Methylene chloride ug/l		Trichloroethylene ug/l	

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

LOCATOR: SAMPLE ID: COLLECTION DATE:	LOCATOR: SAMPLE ID: TION DATE:	MW1 PC-P1-MW1-GW4 09/15/93	-GW4	MW2 PC-P1-MW2-GW4 09/09/93	-GW4	MW3 PC-P1-MW3-GW4 09/10/93	3-GW4 33	MW4 PC-P1-MW4-GW4 09/10/93	-GW4	MW6 PC-P1-MW6-GW4 09/15/93	-GW4	MW11 PC-P1-MW11-GW4 09/14/93	  -GW4  3	
* *	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	. 1
8020		,	;			ť		9	٥	8	-	0.15	=	
1,2-Dichlorobenzene	ng/I	0.15	<b>o</b> :	0.30	<b>29</b> ;	0.70	n =	0.15		8 \$	, -	0.20	0	
1,2-Dimethylbenzene	l/gu	0.20	>	0.20		0.0		0.50		0.00	•	0,0	· =	
1,3-Dichlorobenzene	ng/J	0.74	-	0.13	m ~	0.21	9	0.23		<b>7.3</b> 0		9.		1
1.3-Dimethylbenzene	l/gu	2.80		1		•		•	;	01				
1.3/1.4-Dimethylbenzene	l/gu	•		0.50	_	0.50	n 0	0.50		•		0.50	)	<b>.</b>
1.4-Dichlorobenzene	l/Zn	0.15	n	4.0	B .	0.35		9.0	<b>m</b>	<b>S</b> :		7.0		2
1.4-Dimethylbenzene	l/gn	2.80		1		•		•		61		' 6		
Benzene	l/gn	13		0.3	C C	0.0	ō.	0.35		01		0.0		
Chlorobenzene	l/gn	0.25	D	0.25	2 O	0.25	_	0.25	Þ	9.0		0.2	- •	<b>-</b> :
Ethylhenzene	/Jan	5.90		0.20	n c	0.20		0.12		99		0.2		<b>-</b> :
Methyl-t-Butyl Ether	l/an	8	Ω	\$	Ω	S		5		2.10	_	<b>.</b>		<b>)</b>
Styrene	l/an	0.25	D	0.25	S U	0.25	n Si	0.25		8.5(	<b>-</b>	0.2		<b>-</b>
Tolliene	ng/l	0.14		0.25	S U	0.25		0.11	<b>8</b>	0.29	_	0.2		_
LCBNA								,	;	١	:		-	:
1.2.4-Trichlorobenzene	l/gu	5	Ω	\$	ם	S	ם	S.	<b>)</b>	o,	<b>&gt;</b> :	n 4	. د	<b>.</b>
2.2'-Oxvbis(1-Chloropropane)	l/gn	5	Ω	5	ם	5	ב	S	<b>D</b>	so ;	<b>)</b>	n (	. د	<b>&gt; :</b>
2.4.5-Trichlorophenol	ug/l	20	ם	20	n	20	ר	20	<b>&gt;</b> :	70	<b>)</b> :	20,	. ر	<b>)</b> :
2.4.6-Trichlorophenol	l/gn	3	D	5	D	5	Þ	ν, '	<b>D</b> ;	vo v	<b>)</b> :	י ח	۔ ر	<b>&gt;</b> :
2,4-Dichlorophenol	l/gn	\$	Ω	5	D	S	Þ	<b>v</b> , 1	<b>&gt;</b> :	n (	<b>.</b>	י ח	_ ر	<b>&gt;</b> :
2,4-Dimethylphenol	l/gn	09.0	<u>.</u> (	S	Þ	S	<b>)</b>	s (	<b>&gt;</b> :	7 6	- :	ר ל		o =
2,4-Dinitrophenol	l/gn	50	n	20	D I	20	<b>)</b>	07	<b>)</b>	97	<b>&gt;</b> =	3 4		) <b>=</b>
2,4-Dinitrotoluene	l/gn	S	ם	<b>.</b>	n :	vo i	<b>)</b> :	n 4	<b>&gt;</b> :	O 4	> =	v	, <u>-</u>	) <b>=</b>
2,6-Dinitrotoluene	ng/l	2	Ω	<b>S</b>	<b>)</b>	n,	o :	יח	<b>&gt;</b> :	7 <b>4</b>	<b>=</b>	·	, _	) =
2-Chloronaphthalene	ng/l	S	D	<b>.</b>	n :	Š	<b>&gt;</b> :	י מ	<b>&gt;</b> :	. v	> =	n w	-	· =
2-Chlorophenol	l∕gu	s.	ח	S ;	<b>)</b>	n (	<b>&gt;</b> :	n (	<b>&gt;</b>	٠ د	) <b>=</b>	, 6	, <u>-</u>	· =
2-Methyl-4,6-Dinitrophenol	l/gn	20	Þ	20	<b>-</b>	70	o ;	9, 1	<b>:</b>	Q <b>~</b>	•	3 4	-	· =
2-Methylnaphthalene	ug/l	S	n	S.	Þ	in i	o :	<b>α</b> '	<b>-</b> :	4 4	=	٠ ٧		) =
2-Methylphenol	l/gu	\$	Þ	S	<b>D</b>	s (	o ;	n g	<b>)</b>	٠ ﴿	<b>&gt;</b> =	י כ	,	) <b>=</b>
2-Nitroaniline	l/gu	20	D	20	Þ	20	<b>&gt;</b> 1	50	<b>)</b> ;	₹,	<b>:</b>	3 4		<b>&gt;</b> =
2-Nitrophenol	/gn	S	D	5	D	<b>'</b>	<b>&gt;</b> :	'n	<b>&gt;</b> ;	n	<b>&gt;</b>	n v	_	o =
3,3'-Dichlorobenzidine	l/gu	S	D	S	)	s ;	<b>)</b>	n (	<b>&gt;</b> :	n (	<b>:</b>	, د		) <b>=</b>
3-Nitroaniline	ug/l	20	ם	50	o:	20	<b>&gt;</b> ;	20	<b>-</b> :	2 4	<b>&gt;</b> =	3 v	-	o <b>=</b>
4-Bromophenyl phenyl ether	ug/l	S.	Þ	\$	י c	S	o;	o v	<b>:</b>	n 4	<b>&gt;</b> =	7 <b>V</b>	-	<b>=</b>
4-Chloro-3-methyl phenol	ng/I	8	Ω	8	D	2	Þ	S	<b>-</b>	n	>	C		,

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

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	QUAL	D	11	=	<b>)</b>	<b>2</b> 0	a d	3 =	٠ د	<b>-</b> ;	ם	0	D		Ω	,	=	)	c	>	:	70	<b>&gt;</b>	כ		Þ	Ø	×	D	n	111	3 5	70		<b>e</b>		ø	a		
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PC-P	RESULT																						_	_	_	_	_	_				١.	,	<b>~</b>	_		•	<b>x</b> a		
-GW4	QUAL	=	=	:	>	m		ر	<b>-</b>	<b>-</b>	D	D	Ω	=	=	) <b>=</b>	=		20.0	<b>)</b>	ה ב	_		n 0	n	Ω	æ	9	ח	· =	? =	5 ;			æ 09					
MW3 PC-P1-MW3-GW4 09/10/93	RESULT	•	, •	, v	'n	<b>oo</b> ′	00 31	40.20	35	4	4	-	_	. "	, "	. a	0 0	0 1	o	4	7	7	0.20	0.20	18	81	9		4	₹	r c	n (	<b>.</b>	12.60	10.30		ć	0.40		
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MW1 PC-P1-MW1-GW4 09/15/93	RESULT	•	n '	S	\$	33		45	35	7.70	4 10		٠.	<b>-</b> \	n i	m ¦	38	<b>∞</b>	88.90	4	34.30	7	0.20	0.00	3.5	) •	0 "	ם כ	⊻ •	4.	4	m	6	64.5	4			2		
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LOCATOR: SAMPLE ID: COLLECTION DATE:	Þ	8																	April 2004 Ota		Aldir Aldir				48. 48.						g 18 grees geles							suo		
COLLE				nethane	her	halate			-0	,						þ		P3							-				Ď.									ydrocarb		26°
				oethoxy)	o (lython	exyl)pht			Dissolve			Issolved		Dissolve		Dissolve		Dissolv		issolved		harsto	navio		Dissolve		ssolved		Dissolve		ssolved		Dissolve		Policed			oleum H		
			Pyrene	bis(2-Chloroethoxy)methane	bis 7-Chloroethyl) ether	bis(2-Ethylhexyl)phthalate	METALS	Antimony	Antimony Dissolved	Arrenic ,	Allecille.	Arsenic, Dissolved	Beryllium	Beryllium, Dissolved	Cadmium	Cadmium, Dissolved	Chromium	Chromium, Dissolved	Copper	Copper Dissolved	Lead	1 and Discolared	Margin Diss	Mercury	Mercury, Dissolved	Nickel	Nickel, Dissolved	Selenium	Selenium, Dissolved	Silver	Silver, Dissolved	Thallium	Thallium, Dissolved	7:50	Zine Dissolved	1	ТРН	Total Petroleum Hydrocarbons		

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

Mathematical particular   Mathematical par	LOCATOR: SAMPLE ID: COLLECTION DATE:	MW12 PC-P1-MW12-GW4 09/14/93	2 (2-GW4 93	MW13 PC-P1-MW13-GW4 09/14/93	-GW4	MW14 PC-P1-MW14-GW4 09/15/93	4 [4-GW4 93	MW3 PC-FF7-MW3-GW4 09/15/93	3-GW4	MW1 PC-MP2-MW1-GW4 08/10/93	1-GW4	MW2 PC-MP2-MW2-GW4 08/15/93	72-GW4
the continue and a co	UNITS:		QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
receipance uggl		,	;	•	. :	•	;	Ġ	;		;	•	;
wight         0.45         U			o :	0.35	<b>D</b> :	0.3	o :	0.35	<b>&gt;</b> ;	0.35	o :	0.3	<b>&gt;</b> ;
The continue wight 0.40 U 0.40			o O	0.35		0.3	S C	0.35		0.35		0.3	
hane         ug/l         0.25         U         0.35			n 0	0.40		4.0	n 0	0.4(		0.40		9. 4.	
Part			S U	0.25		0.2	5 U	0.25		0.5		0.2	O .
Part			5 U	0.35	n	0.3	5 U	0.3	_	0.3	2	0.3	Ω •
ug/l         0.35         U				0.35		0.3		0.3		0.3		0.3	
ug/l         0.35         U			S U	0.35		0.3		0.3		0.3		0.3	
tente ug/1 (3.0) (1.0) (3.0) (			S U	0.35	n	0.3	_	0.3		0.3		0.3	
ne         ug/l         0.25         U         0.20         U         0.20         U         0.20         U         0.20         U         0.20         U         0.30				0.30		0.3		0.3		0.3		0.3	
vig/1         0.30         U			5 U	0.25		0.2		0.2		0.2	•	0.2	
ug/I         0.30         U				0.30	ם	0.3		0.3		0.3		0.3	
cent         ug/l         0.20         U         0.20			n 0	0.30		0.3		0.3		0.3	_	0.3	
propylene         ug/l         0.30         U         0.30 </td <th></th> <td></td> <td>O O</td> <td>0.20</td> <td>Ω</td> <td>0.2</td> <td></td> <td>0.20</td> <td></td> <td>0.20</td> <td></td> <td>0.2</td> <td></td>			O O	0.20	Ω	0.2		0.20		0.20		0.2	
ropinopylene         ug/l         0.25         U         0.20         U         0.2			O O	0.30	n	0.3		0.3		0.3	<b>D</b> 0	0.3	D C
cene         ug/1         0.20         U         0.40	2		S U	0.25	n	0.2		0.2		0.2		0.2	
ug/l         0.40         U			O O	0.20	ב	0.2		0.2		0.2		0.2	
ug/l         0.25         U			D 0	0.40	D	0.4		9.0		9.0	<b>D</b> 0	0.4	<b>n</b> 0
ug/l         0.35         U			.5 U	0.25		0.2		0.2		0.2		0.2	5 U
ug/l         0.85         U			S U	0.35		0.3		0.3		0.3		0.3	S U
ug/I         0.25         U         0.26         U         0.40         U         0.40         U         0.50         U	/gu		15 U	0.85		8.0		8.0		8.0	s U	8.0	s u
ug/1         0.40         U         0.63         0.92         0.40         U         0.40           ug/1         0.50         U         0.50 <th></th> <td></td> <td>.S U</td> <td>0.25</td> <td></td> <td>0.2</td> <td></td> <td>0.2</td> <td></td> <td>0.2</td> <td></td> <td>0.2</td> <td></td>			.S U	0.25		0.2		0.2		0.2		0.2	
ug/l         0.50         U         0.35         U			D 01	0.40		0.0	33	6.0	7	0.4		9.0	
ug/1         0.35         U	/8n		n 0:	0.50		0.5		0.5		0.5		6.0	-
ug/l         0.35         U         0.36         U         0.50         U         0.40         U		_	•	0.35		0.3		0.3		0.3		0.3	
ug/I         0.50         U         0.30         U         0.35         U         0.35         U         0.35         U         0.35         U         0.30         U         0.40         U	/8n		15 U	0.35		0.3		0.3		0.3		0.3	
ug/I         0.35         U         0.35         U         0.68         J         0.75         J         0.35         U         0.36           ug/I         0.30         U         0.30         U         1.90         2.30         U         0.30         U         0.30           ug/I         0.40         U         0.40 <th>/8n</th> <td>_</td> <td></td> <td>0.50</td> <td></td> <td>0.5</td> <td></td> <td>6.0</td> <td></td> <td>0.5</td> <td>_</td> <td>0.5</td> <td></td>	/8n	_		0.50		0.5		6.0		0.5	_	0.5	
ug/I         0.30         U         1.90         2.30         0.30         U         0.30           ug/I         0.40         U         0.40 <th>ân</th> <td></td> <td></td> <td>0.35</td> <td></td> <td>0.6</td> <td></td> <td>0.7</td> <td></td> <td>0.3</td> <td></td> <td>0.3</td> <td></td>	ân			0.35		0.6		0.7		0.3		0.3	
ug/I         0.40         U         0.45         U			_	0.30		1.5	0	2.3	0	0.3		0.3	
ug/l         0.45         U         0.50         U         0.30         U				0.40		0.		0.4		0.4		7.0	
ug/I         0.50         U         0.30         U				0.45		·0		4.0		0.4		0.7	
ug/l         0.15         B         0.12         B         0.21         B         0.24         B         0.17           ug/l         0.30         U         0.30         U         0.30         U         0.30         U           ug/l         0.55         U         0.55         U         0.55         U         0.55         U				0.50		0.0		0.5		0.5		0.9	
ug/i 0.30 U 0.55 U 0.55 U			15 B	0.12		···		0.2		0.1	7		D
ug/i 0.30 U 0.30 U 0.30 U 0.30 U 0.30 U 0.30 U ug/i 0.55 U 0.55 U 0.55 U 0.55 U		مسدد	n 08	0.30		0		0.3		0.3		0.3	n 0
ug/1 0.55 U 0.55 U 0.55 U 0.55 U				0.30		0		0.3		0.3		0.3	D 0
				0.55		0		0.5		0.5		0.9	S U
		posterior de											

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

GW4	QUAL	<b>E</b>	ם	ם		D	ם		Þ	D	Ω	כ	n	М		:	<b>)</b> ;	<b>)</b>	<b>)</b>	<b>&gt;</b> :	<b>&gt;</b> :	<b>&gt;</b> :	<b>)</b> :	<b>&gt;</b> =	> <b>:</b>	<b>-</b>	) <b>:</b>	<b>:</b>	<b>)</b>	<b>&gt;</b> :	<b>&gt;</b> :	<b>&gt;</b> =	<b>&gt;</b>	<b>&gt;</b>	<b>)</b> :	>	
MW2 PC-MP2-MW2-GW4 08/15/93	RESULT Q	0.50	0.20	0.20		0.50	0.15	•	0.35	0.25	0.20	5	0.25	0.00		,	'n	s ;	20	vo i	ss v	so ;	, 20	n 4	n 4	n 4	٠ (	3 '	n 4	n (	97 4	n 4	n e	97	n •	n	
3W4	QUAL	æ	=	=	)	ם	м		n	Þ	Þ	ם	ם	B		;	<b>D</b>	D	<b>&gt;</b>	D :	<b>D</b> :	<b>&gt;</b>	<b>D</b> :	<b>-</b> :	<b>:</b>	<b>-</b> :	<b>:</b>	<b>&gt;</b> :	<b>&gt;</b> ;	<b>&gt;</b> :	<b>&gt;</b> :	<b>&gt;</b> :	э;	<b>&gt;</b> :	<b>&gt;</b> ;	>	
MW1 PC-MP2-MW1-GW4 08/10/93	RESULT	0.0	02.0	0.20	}	0.50	0.13	•	0.35	0.25	0.20	5	0.25	0.22		•	\$	<b>S</b>	70	<b>S</b>	<b>v</b> o '	<b>~</b>	50	'n	n '	n 4	n (	07	o ,	^ {	9,	n •	n (	2,	n '	n	
3W4	QUAL	=	) <b>:</b>	<b>=</b>	)		n			ם	Ω	ם	D				Þ	Þ	D	ב	ם	n	ם :	<b>&gt;</b> :	o :	<b>&gt;</b> :	<b>&gt;</b> :	<b>&gt;</b> ;	<b>)</b>	<b>&gt;</b> :	<b>-</b> :	<b>-</b> :	<b>)</b>	<b>&gt;</b> :	<b>o</b> :	0	
MW3 PC-FF7-MW3-GW4 09/15/93	RESULT	<b>31</b> 0	0.10	0.20	07:0	) 1	0.15	0.00	0.10	0.25	0.20	5	0.25	0.21			S	ν	70	sc.	S	2	70	vo v	· ·	<b>α</b> '	n (	07.	s '	<b>S</b>	20	'n	<b>^</b> ;	20	ko i	S	
3W4	QUAL	=	<b>&gt;</b> =	<b>:</b>	•		1	)		ם	æ	n	Ω				Þ	Þ	ח	ח	ם	ח	ם	: כ	<b>)</b>	<b>)</b>	<b>&gt;</b> :	<b>-</b>	<b>D</b>	<b>)</b>	<b>&gt;</b>	<b>&gt;</b> :	<b>&gt;</b>	ם ו	Þ	Þ	
MW14 PC-P1-MW14-GW4 09/15/93	RESULT	9	0.13	0.20	07.0	61.0	0.15	0.19	0.11	0.25	0.22	s	0.25	0.20			\$	5	20	5	S	s	20	<b>v</b>	. S	s ,	n ;	70	<b>S</b>	<b>.</b>	20	. S	S	20	<b>S</b>	<b>S</b>	
3W4	QUAL	:	<b>&gt;</b> =	۽ د	٩	Ξ	, m	1	Þ	Ω	n	n	n	B			D	D	ם	D	ר	D	n	ב	D	<b>&gt;</b>	)	O	ם	D	D	י ב	<b>&gt;</b>	D	<b>-</b>	Þ	
MW13 PC-P1-MW13-GW4 09/14/93	RESULT		0.13	0.20	<u> </u>	050	990	8. '	0.35	0.25	0.20	5	0.25	0.22			ν	5	20	\$	\$	S	20	\$	S	\$	S	20	S	\$	70	S	2	20	S	S	
GW4	QUAL	;	<b>&gt;</b> :	<b>:</b>	>	Ξ	2	2	Ξ	D	n	n	Ω	B			n	Ω	ņ	n	ם	Ω	n	D	D <sub>_</sub>	<b>D</b>	)	<b>&gt;</b>	Þ	D	ם	Þ	D	ם	D	D	
MW12 PC-P1-MW12-09/14/93	RESULT	•	0.15	0.20	07.0	. 0	0.50	07:0	0.35	0.25	0.20	<b>~</b>	0.25	0.15			νc	S	20	S	S	\$	20	\$	S	2	S	20	5	5	20	S	s.	70	s.	s.	
LOCATOR: SAMPLE ID: TION DATE:	UNITS:	1	ug/l	ug/I	- 160 200	ngvi	1/8/1 1/8/1	7 / P	- (g)	/en	Van	l/an	l/an	ng/l	)		I/8n	I/Sn	l/gu	ng√l	l/gu	l/gu	l/gn	l/gu	ng/1	Vgn .	l/gn	I/an	I/gn	ng∕l	l/gn	∏8n	Vgn ∵	ug/l	l/gn	l/gu	
LOCATOR: SAMPLE ID: COLLECTION DATE:		8020	1,2-Dichlorobenzene	1,2-Dimethylbenzene	1,3-Dichlorobenzene	1,3-Dimethylbenzene	1,3/1,4-Dimemyloenzene	1,4-Diemorobenzene	1,4-Dimemylochzene Demzene	Chlorohenzene	Fithvlhenzene	Methyl-r-Butyl Ether	Styrene	Toluene		LCBNA	1,2,4-Trichlorobenzene	2,2'-Oxybis(1-Chloropropane)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2.4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methyl-4,6-Dinitrophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	4-Bromophenyl phenyl ether	4-Chloro-3-methyl phenol	

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

	LOCATOR:	MW12	2	MW13	-	MW14	4	MW3		MWI		MW2	
COLLEC	SAMPLE ID: COLLECTION DATE:	PC-P1-MW12-GW4 09/14/93	12-GW4 93	PC-P1-MW13-GW4 09/14/93	3-GW4 3	PC-P1-MW14-GW4 09/15/93	[4-GW4 93	PC-FF7-MW3-GW4 09/15/93	3-GW4 3	PC-MP2-MW1-GW4 08/10/93	1-GW4	PC-MP2-MW2-GW4 08/15/93	72-GW4 33
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloroaniline	l/gu	5	Ω	5	Ω	S	Ω	S	Ω	s.	D	ĸ	Ω
4-Chlorophenyl phenyl ether	l/gu	v:	Ω	5	Ω	\$	Ω	\$	n	S	n	\$	ם
4-Methylphenol	l/gn	5	n	s	Þ	5	Ω	S	D	5	n	5	ם
4-Nitroaniline	l/gu	20	D	20	D	20	Ω	20	n	20	מ	20	Ω
4-Nitrophenol	l/an	20	Þ	20	Ω	20	Ω	20	Ω	20	n	20	D
Acenaphthene	V8n ∵	S	Ω	S	D	S	Ω	S	ם	\$	n	s.	ם
Acenaphthylene	J/ẩn	8	Ω	5	Ω	5	D	s	n	\$	D	S	n
Anthracene	l/gn	5	O	\$	Ω	5	D	\$	n	s	D	\$	ם
Benzo(a)anthracene	l/gn	S	n	2	n	\$	Ω	S	n	S	D	5	Þ
Benzo(a)pyrene	l/gu	5	n	s	Ω	S	ם	\$	D	S	Þ	\$	D
Benzo(b)fluoranthene	l/gn	5	n	S	Ω	S	Ω	\$	n	S	Þ	S	D
Benzo(ghi)perylene	l/gn	S	D	S	ם	5	D	S	ח	S	Þ	S	כ
Benzo(k)fluoranthene	ug/l	\$	Ω	\$	ם	S	Ω	ĸ	D	ĸ	ם	s	ם
Butyl benzyl phthalate	l/gu	5	Ω	5	n	\$	Ω	\$	D	80	n	8	D
Chrysene	l/gu	5	Ω	\$	Ω	S	Ω	S	D	S	D	S	Þ
Di-n-butyl phthalate	l∕gu	5	n	S	Ω	0.80	<b>9</b> 0	0.00	) B	\$	n	S	Ω
Di-n-octyl phthalate	√gn	5	n	5	n	5	Ω	\$	Ω	\$	Ω	5	Ω
Dibenzo(a,h)anthracene	l/gn	\$	Ω	5	D	5	n	s	Ω	S	D	S	Ω
Dibenzofuran	l/gu	2	ח	5	D	5	Ω	S	n	S	n	S	D
Diethyl phthalate	Ng/I	09.0	90 B	0.50	0 38	09.0	9 0	5	Ω	s.	D	-	•
Dimethyl phthalate	l/gu	\$	Ω	3	D	5	ם	\$	Ω	S	ח	5	n
Fluoranthene	l/8n	5	n	5	D	\$	n	S	n	\$	n	\$	Ω
Fluorene	I/ẩn	5	Ω	5	Þ	5	ם	2	Ω	S	D	S	n
Hexachlorobenzene	l/gn	5	D	\$	n	5	Ω	5	Ω	5	Ω	<b>S</b>	Ω
Hexachlorobutadiene	l/gu	S.	ם	; <b>S</b>	n	5	Ω	\$	Þ	S	n	3	Ω
Hexachlorocyclopentadiene	l/gn	3	Ω	5	Ω	5	ם	5	ם	S	ם	5	n
Hexachloroethane	Ngu ⊓	5	D	5	D	5	D	5	D	\$	n	5	ם
Indeno(1,2,3-c,d)pyrene	l/gn	5	Ω	5	n	5	n	5	D	ν.	Þ	5	D
Isophorone	l/gn	5	n	5	n	S	Ω	\$	n	S	Þ	5	n
N-Nitrosodi-N-Propylamine	l/gn	\$	D	5	n	5	n	5	D	\$	D	5	ם
N-Nitrosodiphenylamine	l/gu	5	n	. 5	D	5	ם	5	D	5	n	5	D
Naphthalene	I/gu	S	Ω	S	n	\$	n	5	Ω	5	n	\$	ם
Nitrobenzene	l/gu	\$	Ω	5	n	5	n	s	D	<b>S</b>	D	5	ם
Pentachlorophenol	l/gn	20	Ω	20	D	20	D	20	Ω	20	Ω	20	D
Phenanthrene	1/gn	\$	Ω	\$	Þ	\$	D	ς.	n	S	D	\$	D
Phenol	l/gu	5	Ω	-		2	<b>£</b>	\$	ם	\$	Þ	5	Þ

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

<b>4</b>	ΑĽ	D	n	n	В	;	o g	9B :	<b>-</b>	<b>m</b> ;	D :	<b>&gt;</b>	Þ	Þ	D	D	0 <b>B</b>	D	Ω	<b>x</b>	n	n	D	n	Þ		D	ם	αΓ			D		۵	q		
72 W2-GV /93	QUAL						ş	20	1	2							4.50			4.10	20	0.20												9	90.		
MW2 PC-MP2-MW2-GW4 08/15/93	RESULT	s	ν.	\$	1	1	35	42.30	4	14.70	-	-	3	e	∞	∞	4.	4	7	4	Ö	Ö	18	18	3		4	4	9	OL.	100	4		•	9		
-GW4	QUAL	D	Þ	ם	Д		<b>&gt;</b> :	Þ		e	Þ	Þ	Þ	ם	n	Þ		Þ		D	ם	Π	ם	n	D		ם	Þ	n	e		0			Δ,		
MW1 PC-MP2-MW1-GW4 08/10/93	RESULT	8	S	ν.	-		35	35	14.70	7.20	-	-	m	æ	∞	<b>∞</b>	27.80	4	4.50	7	0.20	0.20	81	18	ю	Ω	4	₹	3	~	43.50	19.10		03.0	06.2		
GW4	QUAL	n	ם	D	B		: כ	ם :	Þ	0 <b>B</b>	Þ	Þ	n	כ	ח	ם	n	n	ם	ΩΓ	D	D	n	כ	0 <b>B</b>	n	ם	ם	ΩΓ	'n	0	0			Z)		
MW3 PC-FF7-MW3-GW4 09/15/93	RESULT	\$	ς.	v	11		45	35	4	4.10	4	-	\$	m	10	<b>∞</b>	15	4	2	7	0.20	0.20	35	18	3.40	n	4	4	8	8	11.70	9		6	0.80		
	QUAL	D	n	n	Ø		Ω	Þ	ם	n	ח	Þ	Ω	Ω	Ω	n	n	Ω	D	ΩΓ	n	D	ם	ם	ηſ	ю	n	Þ	'n	5	C	Ò		;	>		
MW14 PC-P1-MW14-GW4 09/15/93	RESULT Q	٠,	٧:	, vo	4		45	35	4	4	4	_	5	m	10	∞	15	4	7	7	0.20	0.20	35	18	8	œ	4	4	m	m	7.50	4		,	0.25		
W4	QUAL	n	=	ם כ	м		n	ם	¥	ם	n	Ω	D	n		n		n	1	ΩΓ	ָם	ם	ם כ	n	UĽ	~	n	Ω	'n	5 5	;	n			Ø		
MW13 PC-P1-MW13-GW4 09/14/93	RESULT Q	٠,		ı vı	. 7		45	35	10.90	4	4	-	\$	e	43.90	œ	35.60	4	19.30	7	0.20	0.20	35	8	æ				· m	en	67.10	4		,	080		
W4	QUAL	=	=	) <b>=</b>	, <b>2</b>		Ω	Ω	દ	Ω	Ω	D	D	n		n	'n	=	)	UL		· =	· C	> >	nΓ	4.90	D	<b>-</b>	) II	3 5	3	n		1	ם		
MW12 PC-P1-MW12-GV 09/14/93	RESULT Q	v	· •	, <b>v</b> -	, A		45	35	9.50	4	4		5	m	50.10	œ	15	4	12.70	7	0.20	0.70	38.30	<u>~</u>	'n	~ ∝	4	4	- 647	. "	89.20	4	r	1	0.25		
LOCATOR: SAMPLE ID: 1 COLLECTION DATE:	UNITS:						₩an .	l/gn	l/gn	[∕an	l/gn	NZ0	ng/l	//an	l/an	Ven	Von	7 to 12	1/9n	Von	L/ou			1,9 <u></u>	/Jon	Von	J/an	Voll		. Voi		1/011	<b>S</b>		ocarbons mg/l		
O			Company of the contract of the text	bis(z-Cinoroethul) ather	bis(2-Ethylhexyl)ohthalate	METALS		Antimony, Dissolved	Arsenic	Arsenic. Dissolved	Beryllium	Beryllium, Dissolved	Cadmium	Cadminm Dissolved	Chromium	Chromina Dissolved	Conner Conner	Copper Dissoluted	Lead Lead	Lead Discolard	Merchan	Mercury Mercury Discolared	Nickel	Nickel Discolved	Selenium	Selenium Dissolved	Silver	Silver Diecolyed	Thallinm	Thallier Discoluded	7:nc	Zinc Dissolved		TPH	Total Petroleum Hydrocarbons		

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

1-GW4 3	QUAL																																					
MW1 PC-FF7-MW1-GW4 09/09/93	RESULT		D	B	Ω	ם	D	n	Ω	D	D	n	ם	n	n	ם	ם	ם	ס	Þ	n	Þ	D	D	D	n	Ω	Ω	Ω	Ω	D	n	ם	æ			Þ	
	QUAL		0.35	0.08	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.35	0.30	0.40	0.45	0.50	0.32	0.0	0.12	0.55	
MW6 PC-MP2-MW6-GW4 09/09/93	RESULT		Ω	ם	n	D	D	D	כ	D	D	n	ລ	ם	n	D	ם	D	ח	D	D	D	D	D		ם	ם	ם	<b>D</b>	D -	ם	ם	D	_	D C	D C		
5 VS-GW4 93	QUAL		0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.35	0.30	0.40	0.45	0.50	0.40	0.30	0.30	0.55	
MW5 PC-MP2-MW5-GW4 09/16/93	RESULT		~	~	2	~	×	8	ĸ	<b>~</b>	~	~	~	~	~	æ	~	~	~	ĸ	≃	~	~	₩	ద	×	~	<b>~</b>	8	8	¥	~	~	<b>x</b>	~	2	~	
-GW4	QUAL		n	Ω	ם	ם	n	D	ם	ב	D	D	D	Þ	n	D	ח	Ω	n	Ω	Ω	n	n	ם	n	ם	ח	ם		ב	n	ר	D		n	Ω	ם	
MW9 PC-MP2-MW9-GW4 08/16/93	RESULT		0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.18	0.30	0.40	0.45	0.50	0.05	0.30	0.30	0.55	
GW4	QUAL		D	ם	D	ם	n	D	D	Ω	ם	D	ם	Ω	n	Ω	n	n	n	n	n	ם	ם	D	D	ם	ם	D	Þ	כ	n	Ω	D	D	n	ם	D	
MW4 PC-MP2-MW4-GW4 08/16/93	RESULT		0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.35	0.30	0.40	0.45	0.50	1	0.30	0.30	0.55	
-GW4	QUAL		Ω	Ω	n	Ω	Ω	n	ם	n	n	n	n	ם	כ	D	Þ	n	Ω	n	n	n	Ω	n	n	ח	ח	ח	D	ລ	D	n	n	D	ם	Ω	Ω	
MW3 PC-MP2-MW3- 08/16/93	RESULT		0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.35	0.30	0.40	0.45	0.50	-	0.30	0.30	0.55	
	UNITS:		l/gn	l/gn	ng/I	l/gu	l/8n	l/gn	ug/l	ng/l	ng/l	l/gn	l/gn	l/gn	ng/I	1/gn	l/gn	l/gn	l/gn	l/gn	ng/J	ng/l	l/gn	ng/l	ng/l	ng/l	l/gu	√gn	l/gn	ng/l	ng/l	l/gu	Van	l/gu	ng/l	ug/l	ng/l	
LOCATOR: SAMPLE ID: COLLECTION DATE:		8010	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethylene	1,2,3-Trichloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,2-trans-Dichloroethylene	1,3-Dichlorobenzene	1,3-cis-Dichloropropylene	1,3-trans-Dichloropropylene	1,4-Dichlorobenzene	2-Chloroethylvinyl ether	2-Chlorotoluene	4-Chlorotoluene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Dibromochloromethane	Dibromomethane	Methyl bromide	Methyl chloride	Methylene chloride	Tetrachloroethylene	Trichloroethylene	Vinyl chloride	

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

-GW4	QUAL														:	<b>&gt;</b> =	<b>)</b> ;	<b>&gt;</b> :	<b>&gt;</b> :	<b>)</b> :	<b>D</b> ;	<b>-</b> :	o :	<b>&gt;</b> :	<b>&gt;</b> :	<b>)</b> :	<b>&gt;</b> :	<b>&gt;</b> =	<b>:</b>	<b>&gt;</b> :	<b>&gt;</b> ;	<b>&gt;</b> :	<b>&gt;</b> :	<b>&gt;</b> =	>		
MW1 PC-FF7-MW1-GW4 09/09/93	RESULT	Ω	D	æ	٠:	<b>&gt;</b> =	' כ	' D	n	D	n	D	n			n w	n (	20	ın ı	vo i	s ;	70	vo (	vo v	'n	n g	3,4	n 4	n (	9, '	vo i	s ;	, 20 20	n 4	n		
	QUAL R	0.15	0.20	4.60	9	0.50	CI.0	0.35	0.25	0.20	S	0.25	0.25		;	<b>)</b> :	<b>&gt;</b> :	D:	o :	D	ם	n i	ב ב	<b>&gt;</b> :	: כ	<b>&gt;</b> :	o ;	<b>)</b>	<b>)</b> ;	<b>D</b> 1	Þ	ם	<b>&gt;</b> ;	<b>-</b> :	<b>&gt;</b>		
MW6 PC-MP2-MW6-GW4 09/09/93	RESULT	æ	n	æ	0.06	6	9 C	9.5	ם ס	Þ	D	ם			•	n '	n ;	70	<b>S</b>	S	v.	20	S	<b>~</b>	S.	٠ <u>.</u>	2,	n (	n (	, 20	S	S	გ ՝	'n	0		
	QUAL R	3.40	0.20	0.15		' 6	0.52	0.35	0.25	0.20	s	0.25	0.15		;	o ;	<b>D</b>	Ω	ם	Ω	Þ	ם	ם	ם	Þ	י כ	: כ	o :	<b>)</b>	D '	ם	ם	n :	Þ :	0		
MW5 PC-MP2-MW5-GW4 09/16/93	RESULT	œ	~	<b>~</b>	٠,	<b>×</b> 1	≃	۵ ،	4 04	<b>~</b>	~	~	æ		1	'n	S	70	5	5	s	20	S	s.	s.	<b>S</b>	20	vo i	'n	20	s	S	50	vo ·	'n		
	QUAL	n	ם	n			Þ	=			ם	D	æ			ם ו	D	ם	ם	ם	n	n	ס	D	ם	Þ	n	) ב	D	D	ם	O	D	י ב	Þ		
MW9 PC-MP2-MW9-GW4 08/16/93	RESULT	0.15	0.20	0.20	•	0.50	0.15	- 0 26	500	0.20	\$	0.25	0.26			S.	S	20	5	5	s	20	2	5	S	S	70	\$	2	20	5	5	20	\$	<b>~</b>		
	QUAL	ď	ò	Þ		n	æ	:	<b>&gt;</b> =	<b>&gt;</b> >	Ω	n	В			ם	ם	D	Ω	D	ם	Þ	n	Ω	ם	Ω	ם	Þ	Þ	D	n	D	ם	D	ם		
MW4 PC-MP2-MW4-GW4 08/16/93	RESULT (	0 38	0.20	0.20	•	0.50	0.36	, ,	0.33	0.20	v	0.25	0.21			5	S	20	s	5	5	20	s	5	5	S	20	2	Ś	20	s	S	20	S	S		
GW4 P	QUAL	α	a =	, α		n	n	:	<b>&gt; :</b>	> =	· =	ם מ	<u> </u>			n	n	Ω	n	Ω	n	D	ח	D.	ם	D	Þ	ח	Þ	n	ם	Ω	n	Ω	D		
MW3 PC-MP2-MW3-0 08/16/93	RESULT C	70.0	0.20	0.08		0.50	0.15	1 (	0.35	0.20	<u>,</u>	0.25	0.17			'n	5	20	S	S	\$	20	\$	S	5	\$	20	5	2	70	v	S	50	\$	2		
LOCATOR: SAMPLE ID: PA COLLECTION DATE:	UNITS:	**************************************		]/8n	_go ∏gu	U8n	1/gn	ug/l	ng/l	Tần Vớu	760	1/611	ug/I	)		I/an	l/gn		l/gu	l/gn	l/an	, ngn	uğ/l	l/gn	I/gu	I/gn	I/gn	l/gn	ng/l	l/gu	I/au	UZn	l/gn	1/gn	l/8n		
COLLEC		8020	, 2-Dichlorobenzene	4. Dichlorohenzene	,3-Dimethylbenzene	,3/1,4-Dimethylbenzene	,4-Dichlorobenzene	,4-Dimethylbenzene	90	Chiorobenzene	Machul Dutyl Dibor	ri-t-Dutyi Luici	<b>3</b> 92		IA.	1,2,4-Trichlorobenzene	2.2'-Oxybis(1-Chloropropane)	2.4.5-Trichlorophenol	2.4.6-Trichlorophenol	2.4-Dichlorophenol	2 4-Dimethylphenol	2.4-Dinitrophenol	2.4-Dinitrotoluene	2.6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methyl-4,6-Dinitrophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3.3'-Dichlorobenzidine	3-Nitroaniline	4-Bromophenyl phenyl ether	4-Chloro-3-methyl phenol		
		8020	֡֝֟֝֟֝֟֝֟֝֟֝֟֝֟֝֟֝֟֝֟֝֟֝֟֝֟֝֟֝֟֝֟֝֟֝֟֝֟	֡֝֝֝֡֓֞֝֝֟֝֟֝֟֝֝֟֝֟֝֟֝֓֟֝֟֝֓֟֝֓֓֓֟֝֟֝֟֝֟֝֓֟֝֟֝֓֟֝֟֝֟֝֟֝֟֝֓֟֝ ֓֓֓֓֞֓֞֞֞֞֓֓֞֞֞֞֞֓֓֓֞֞֞֞֓֓֞֞֞֓֓		1,3/1,4	1,4-Di	1,4-Di	Benzene	Chior	Machin	Sturene	Tolitene		LCBNA	1,2,4	2.20	2.4.5	2.4.6	2.4-Di	4.0	2,4-D	2.4-D	2.6-D	2-Chk	2-Chic	2-Met	2-Met	2-Met	2-Nitr	2-Nite	33.1	3-Nit	4-Bro	<u>수</u>		

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

LOCATOR: SAMPLE ID: COLLECTION DATE:		MW3 PC-MP2-MW3-GW4 08/16/93		MW4 PC-MP2-MW4-GW4 08/16/93	t-GW4	MW9 PC-MP2-MW9-GW4 08/16/93	79-GW4	MW5 PC-MP2-MW5-GW4 09/16/93	75-GW4	MW6 PC-MP2-MW6-GW4 09/09/93	'6-GW4	MW1 PC-FF7-MW1-GW4 09/09/93	1-GW4
NO	RES		UAL	RESULT	QUAL								
4-Chloroaniline	Uan.	v	D	ς.	D	v	Ω	¥	Ω	<b>v</b> 1	Ω	v	Ω
phenyl ether	ug/I	· <b>v</b>	ם ס	'n	n	, vo	D	, vo	Þ	, vo	D	, vo	D
4-Methylphenol	ug/I	· v	כ	8	ם	·v	Þ	, <b>v</b> 0	ם	<b>. v</b> O	ם	· <b>v</b> s	'n
4-Nitroaniline	ug/I	20	ם	70	Ω	20	כ	20	D	70	D	20	n
4-Nitrophenol	ng/l	20	D	20	D	20	D	20	D	70	D	20	n
Acenaphthene	/Zn	5	Ω	\$	D	5	Þ	\$	n	ς.	ח	s	D
Acenaphthylene	ug/l	5	Ω	\$	n	S	D	S	D	S	n	v	n
Anthracene	ng/l	5	Ω	\$	ח	8	Ω	S	Ω	S	D	\$	D
Benzo(a)anthracene	ug/l	5	D	5	ם	5	Ω	3	n	\$	D	\$	D
Benzo(a)pyrene	ng/I	2	n	s	Ω	\$	Ω	٠	Ω	S	Ω	\$	D
Benzo(b) fluoranthene	ng/l	2	Ω	s	D	5	Ω	S	Ω	S	D	s	D
Benzo(ghi)perylene	l/gu	2	n	S	D	5	Ω	'n	n	<b>S</b>	n	S	D
Benzo(k)fluoranthene	l/gu	2	Ω	5	Ω	5	D	\$	n	5	Ω	s	D
Butyl benzyl phthalate	ng∕1	5	D	5	Ω	\$	n	5	n	5	Þ	5	ם
Chrysene	l/gn	\$	n	2	n	s	D	\$	ח	\$	D	ν.	D
Di-n-butyl phthalate	√gn	0.50		\$	Ω	ν.	Ω	ς.	D	S	ם	-	M
Di-n-octyl phthalate	ng∕l	<b>?</b>	Þ	ν.	n	\$	Ω	\$	n	\$	Þ	s.	ם
Dibenzo(a,h)anthracene	ug/l	<b>v</b> o 1	ב	<b>S</b>	ם :	\$	D :	\$	Þ	<b>S</b>	ם י	<b>S</b>	n :
Dibenzofuran	ug/l	ς,	<b>D</b>	vo ·	<b>&gt;</b>	S.	<b>D</b>	vo '	<b>&gt;</b> :	YO '	Þ	<b>S</b>	ם ו
Diethyl phthalate	ng/l	7 '	<b>-</b> ;	7	<b>-</b> ;	en (	<b>-</b>	<b>,</b>	<b>&gt;</b> ;	v.	<b>&gt;</b> :	vo i	<b>)</b> :
Dimethyl phthalate	√gn	٠ ،	<b>D</b> :	w i	<b>D</b> :	09.0		S.	<b>D</b> :	<b>S</b>	D :	vo v	<b>:</b>
Fluoranthene	ng/l	Λ·	<b>&gt;</b> :	'n	⊃:	so v	o :	so v	<b>&gt;</b> :	'n,	<b>&gt;</b> :	'n	<b>)</b> ;
Fluorene	l/gu	n (	<b>-</b> :	'n	⊃ ;	'n,	<b>&gt;</b> ;	'n	<b>&gt;</b> :	'n	<b>&gt;</b> :	n '	<b>&gt;</b> ;
Hexachiorobenzene	ng/I	n '	<b>&gt;</b> :	o ,	<b>&gt;</b> :	Λ.	<b>&gt;</b> :	<b>α</b> '	<b>&gt;</b> :	ς ·	<b>&gt;</b> :	n '	<b>&gt;</b> :
Hexachioropulationer 4:	ng/l	n 4	) <b>:</b>	n 4	<b>&gt;</b> :	n u	<b>&gt;</b> :	n u	<b>&gt;</b> :	n u	<b>&gt;</b>	ח ע	<b>&gt;</b>
Hevsekloneshans	ı/gn	ט ע	o :	n v	<b>&gt;</b> =	n 4	ב כ	n v	<b>&gt;</b>	n <b>4</b>	<b>&gt;</b> =	n v	<b>&gt; =</b>
Indeno(1 2 3-c d)novene	1/8/1 110/1	· •	<b>=</b>	o v	) <b>=</b>	<b>,  ,</b>	) <b>=</b>	<b>, v</b>	=	o v	> =	v	> =
Isophorone	1/an	, <b>v</b> .	o D	, <b>v</b> ,	) <b>=</b>	, <b>v</b> c	) =	·	=	, v	) =	, v.	) <b>=</b>
N-Nitrosodi-N-Propylamine	ne/l	٠,	ב	٠,	D	, vo	'n	, vo	D	, v	ם ב	· <b>v</b> o	D
N-Nitrosodiphenylamine	ngu	8	ם	\$	n	\$	Ω	S	D	ν.	n	\$	D
Naphthalene	Vgn	\$	ם	ν.	Ω	S	Ω	ς.	Ω	ς,	D	ν.	D
Nitrobenzene	Van	<b>S</b>	D	s	Ω	5	n	5	ח	5	D	\$	D
Pentachlorophenol	l/gn	20	ב	20	D	20	Ω	20	n	20	D	20	D
Phenanthrene	1/gn	2	Þ	5	Ω	5	n	\$	Ω	5	D	ν,	Ω
Phenol	/gn	0.70	Ø	\$	Þ	\$	D	\$	n	0.90	9	0.60	0
Steel of the Control													

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

COLLE	LOCATOR: SAMPLE ID: COLLECTION DATE:	MW3 PC-MP2-MW3-GW4 08/16/93	3-GW4	MW4 PC-MP2-MW4-GW4 08/16/93	4-GW4	MW9 PC-MP2-MW9-GW4 08/16/93	'9-GW4	MW5 PC-MP2-MW5-GW4 09/16/93	5-GW4	MW6 PC-MP2-MW6-GW4 09/09/93	6-GW4 3	MW1 PC-FF7-MW1-GW4 09/09/93	-GW4
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Porene	Van	80	D	\$	n	ν,	ם	\$	ם	<b>v</b> s	D	\$	n
his 7-Chloroethoxy) methane	l/an	٠,	Þ	8	n	\$	Ω	5	n	· vo	ם	s	D
bis/2-Chloroethyl) ether	(/an	· <b>v</b>	כ	\$	n	ĸ	Ω	S	ב	S	O	5	n
bis(2-Ethylhexyl)phthalate	l/gu	S	Ø	-	æ	7	æ	m	В	7	M	4	Δ
METAIS													
Antimony	/an	44.30	08	35	D	35	n	35	ם	35	D	35	
Antimony, Dissolved	l/gn	35	n	35	Ω	35	D	46.10	0 <b>B</b>	35	D	42.50	Ç
Arsenic	l/gu	4	Þ	4	n	4	Ω	4	D	4	9	4	D
Arsenic. Dissolved	Ngu	4	D	4	Ω	6.10	<b>9</b> 0 (	4	Ω	4	D	4	D
Bervlium	Ngη	-	n	•••	n	-	n	-	n	-	ב	-	D
Bervllium, Dissolved	l/an	-	n	-	n		n	-	Þ		n		ם
Cadmium	ug/l	8	n	8	Ω	ж	Ω	3		m	Þ	က	D
Cadmium, Dissolved	l/gu	3	Ω	8	n	æ	<b>つ</b>	3		m	D	m	<b>&gt;</b>
Chromium	V8n	<b>&amp;</b>	Ω	<b>\$</b>	ם	∞	Ω	œ		<b>∞</b>	ם	•	<b>D</b>
Chromium, Dissolved	l/gu	<b>∞</b>	D	∞	D	<b>∞</b>		∞		∞	ם	••	י כ
Copper	V8n	4	D	4	D	4.50	0	4		4		4	י ב
Copper, Dissolved	l/gu	4	n	4		4	D	4		4	<b>&gt;</b>	4	<b>)</b>
Lead	l/gu	7	D	7	n	2	ם	2		7		7	
Lead, Dissolved	l/gn	7	D	7		7		7	_	7	_	2.30	<u>.</u>
Mercury	l/gu	0.20		0.20		0.2		0.20	<b>&gt;</b>	0.2		0.20	
Mercury, Dissolved	l/gu	0.20	Þ	0.20		0.20		0.20		0.20		0.20	o :
Nickel	l/gn	81	ם	18	Þ	18	D	81		<u>se</u> :		<u>×</u> :	
Nickel, Dissolved	ug/l	18	D	18	ם	18	<b>)</b>	18		<u>×</u>		18	
Selenium	l/gu	ĸ	<b>&gt;</b>	æ	Þ	æ	D	E		<b>.</b>		) 	
Selenium, Dissolved	l/gu	<b>e</b> 0	Ω	m	Ω	m	ם	m ·		m ;		. n	
Silver	√gn	4	n	4	n	4	Ω	4	<b>)</b>	4.6	0;	4 .	<b>&gt;</b> :
Silver, Dissolved	l/gu	4	D	4	)	4	D	4		4		4	
Thallium	l/gu	3	Π	3	ΩΓ	æ	ď	m	Π	m		m ;	
Thallium, Dissolved	1/8n	3	'n	æ	'n	m	TI	~		O.L.		<b>1</b> 5	
Zinc	l/gu	4	ם	193		245		254		9.70	0 OB	4	
Zine. Dissolved	I/an	4	Ω	4	n	10.40	0	5.10	<b>B</b> 0	9.6		15.30	<b>e</b>
	ì												
TPH		09 0	a	0.40	<b>2</b>	0.40	Ç	1.10	8	2.30	<b>B</b>	0.25	D 2
TOTAL FOLDERINI AND CALLE				;			,						

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

	LOCATOR:	MW7		MWI		MW2	۸.	MW3		MW4		MWS	'n	
COLLE	SAMPLE ID: COLLECTION DATE:	PC-MP2-MW7 09/09/93	7-GW4 13	PC-CG3-MW1-GW4 08/15/93	1-GW4 3	PC-CG3-MW2-GW4 08/25/93	v2-GW4 93	PC-CG3-MW3-GW4 08/25/93	/3-GW4 93	PC-CG3-MW4-GW4 08/25/93	74-GW4 93	PC-CG3-MW5-GW4 08/26/93	W5-GW4 /93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	
8010 1.1.1.2-Tetrachloroethane		31.0	=	\$£ ()	=	) 35 0	:	38.0	<u> </u>	25 0	=	-	1 36 0	=
1,1,1-Trichloroethane	1/8n	0.35 35	=	0.35		0.35	35 11	0.35	) = (4)	0.35	2 5	<i>-</i>		, e
1 1 2 2-Tetrachloroethene				000		070	2							ı =
1.1.2-Trichloroethane	ugu Teu	0.40	) <u>.</u>	2.0	) =	; è	0.40	0.40		0.40		<b>&gt;</b>	35.0	<b>.</b>
1.1-Dichloroethane	. (A)	35.0	) =	35.0		c		25.0		0.35		· c		· =
1,1-Dichloroethylene		0.35	2 0	0.35	•	6	0.35 U	0.35		0.35				) <b>)</b>
1,2,3-Trichloropropane	l/gn	0.35	2	0.35		0	0.35 U	0.35		0.35	35 U	0		É
1,2-Dibromoethane	l/gu	0.35	n 2	0.35		0.	0.35 U	0.35	35 U	0	0.35 U	0	0.35	n
1,2-Dichlorobenzene	l/gu	0.30	<b>D</b> 0	0.30	Ω 0	0.	0.30 U	0.0	0.30 U	0.0	0.30 U	0	.30	Ω
1,2-Dichloroethane	l/gu	0.25	S U	0.25	S U	0.	0.25 U	0	0.25 U	0	0.25 U	0	0.25	D
1,2-Dichloropropane	l/gu	0.30	n 0	0.30	n 0	0.	0.30 U	0	0.30 U	0.	0.30 U	Ü	0:30	Þ
1,2-trans-Dichloroethylene	/gn	0:30	n 0	0.30	n 0	0.	0.30 U	0	0.30 U	0	0.30 U	Ū	0.30	Þ
1,3-Dichlorobenzene	l/gu	0.20	n 0	0.20		0.	0.20 U	0	0.20 U	0	0.20 U	•	0.20	D
1,3-cis-Dichloropropylene		0.30	n 0	0.30	n 0	0	0.30 U	0	0.30 U	Ó	0.30 U	•	0.30	n
1,3-trans-Dichloropropylene		0.25	s U	0.25	5 U	Ö	0.25 U	0	0.25 U	Ó	0.25 U		0.25	Þ
1,4-Dichlorobenzene	[/dn		<b>n</b> 0	0.20	D 0	Ó	0.20 U	0	0.20 U	0	0.20 U		0.20	n
2-Chloroethylvinyl ether	l/gu	0.40	n 0	0.40	n 0	0	0.40 U	0	0.40 U	0	0.40 U		0.40	Þ
2-Chlorotoluene	//an	0.25	5 U	0.25	.5 U	0	0.25 U	Ö	0.25 U	0	0.25 U		0.25	D
4-Chlorotoluene	l/gu		5 U	0.35	S U	0	0.35 U	0	0.35 U	0	0.35 U		0.35	n
Bromobenzene	l/gu		S U	0.85	S U	0	0.85 U	Ö	0.85 U	0	0.85 U		0.85	n
Bromochloromethane	l/8n	0.25	S	0.25	.5 U	0	0.25 U	0	0.25 U	0	0.25 U		0.25	n
Bromodichloromethane	l/gu		n 0	0.40	D 01	0	0.40 U	Ó	0.40 U	•	0.40 U		0.40	D
Вготогогт	l/gu	0.50	n 0:	0.50	n 03	0	0.50 U	0	0.50 U	0	.50 U		0.50	Þ
Carbon Tetrachloride	l/gu	1 0.35	O . S	0.35	15 U	0	0.35 U	0	0.35 U	0	0.35 U		0.35	n
Chlorobenzene (	l/gu	1 0.35	15 U	0.35	15 U	0	0.35 U	0	0.35 U	0	0.35 U		0.35	n
Chloroethane	l/gu		Ω . 09	0.50	O O	0	0.50 U	0	0.50 U	0	.50 U		0.50	n
Chloroform	l/3n	1 0.35	35 U	0.17	17	0	0.35 U	0	0.35 U	0	0.32		0.35	n
Dibromochloromethane	/gn		30 U	0.0	O O	0	0.30 U	0	0.30 U	0	0.30 U	_	0.30	Þ
Dibromomethane	l/gn		40 U	0.40	D 0+	O	0.40 U	0	0.40 U	0	0.40 U	_	0.40	⊃
Methyl bromide	/gn		45 U	0.45	45 U	0	0.45 UJ		0.45 U	0	0.45 U	_	0.45	n
Methyl chloride	l/gu		_	0.50	S0 U	0	0.50 U	0	0.50 U		0.50 U		0.50	Þ
Methylene chloride	l/gu		42 B	80.0	80	0	0.13 B	0	0.27 B			В	0.31	æ
Tetrachloroethylene	l/gn		30	0	0.30 U		0.30 U	0	_				0.30	Þ
Trichloroethylene	/gu		36	0	0.30 U	0	0.30 U				0.30 U	_	0.30	D
Vinyl chloride	/an	71 0.55	55 U	0	0.55 U	0			0.55 U			-	0.55	n

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

PC-CG3-MW3-GW4 PC-CG3-MW4-GW4 PC-CG3-MW5-GW4  08/25/93 08/25/93 08/26/93  RESULT QUAL RESULT QUAL RESULT QUAI
RESULT QUAL RESULT
RESULT QUAL RE
COLLECTION DATE: 09/09/93 UNITS: RESULT (

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

GW4	QUAL	D	n	n	O	Ω	ם	D	D	ם	ם	Þ	D	Ω	n	ם	Ω	Ω	n	n	Ω	Ω	Ω	Ω	n	n	D	ח	n	n	Þ	ם	D	D	D	D	D	
MW5 PC-CG3-MW5-GW4 08/26/93	RESULT	٧.	٧,	\$	70	20	S	s	S	S	S	S	5	\$	5	\$	ν,	S		5	\$	8	5	5	νs	S	\$	s.	\$	S	S	S	S	\$	20	\$	\$	
-GW4	QUAL	D	D	n	D	D	n	n	ם	ם	ם	D	ם	ם	n	ם		Ω	Þ	ם	D	Ω	Ω	Ω	n	ח	n	n	ם	ם	Þ	D	Ω	D	Þ	ם	æ	
MW4 PC-CG3-MW4-GW4 08/25/93	RESULT	v	8	s	20	20	5	\$	S	\$	S	5	S	5	\$	v	0.80	s	S	5	\$	ν	S	S	S	s.	S	S	S	S	\$	s	S	s	20	S	0.50	
-GW4	QUAL	ם	ח	Ω	Ω	n	n	ח	n	ם	Ω	ם	D	n	n	n		D	ם	ם	D	n	Ω	Ω	Ω	Ω	n	Ω	n	n	n	n	D	D	ם	D	Ø	
MW3 PC-CG3-MW3-GW4 08/25/93	RESULT	~	\$	'n	20	70	s	S	s.	v.	ν.	ν.	νs	S	8	s	0.80	S	S	S	\$	5	S	S	5	5	\$	5	5	\$	S	S	\$	s	50	\$	-	
-GW4	QUAL	D	n	Þ	Ω	n	n	n	Ω	n	n	n	n	D	Ω	n		Ω	ח	n	D	ח	n	D	D	ח	D	Ω	Ω	Ω	ם	n	n	n	ם	Ω	Ω	
MW2 PC-CG3-MW2-GW4 08/25/93	RESULT	\$	5	5	20	70	\$	5	S	S	\$	S	S	\$	5	\$	0.80	\$	s	\$	\$	5	s	5	s	5	5	5	5	S	5	5	5	2	20	\$	\$	
-GW4	QUAL	D	D	n	Ω	Þ	n	Ω	Ω	D	Ω	Ω	D	D	Ω	ם	Þ	n	n	D	'n	-	Ω	Þ	Ω	D	n	Ω	Ω	Ω	n	Ω	Ω	n	Ω	D	Ω	
MW1 PC-CG3-MW1-GW4 08/15/93	RESULT	8	5	8	20	20	\$	35	<b>S</b>	νs	S	S	\$	\$	S	ν.	3	5	s	\$	7		5	S	\$	s	s	S	S	s	S	S	S	S	20	S	5	
7-GW4	QUAL	D	ם	n	ם	Þ	n	n	n	ח	Ω	Ω	Ω	n	Ω	n	Д	Ω	Ω	ם		n	Ω	Ω	ם	Ω	D	n	n	Ω	Ω	ח	n	D	Ω	Ω		
MW7 PC-MP2-MW7-GW4 09/09/93	RESULT	8	\$	S	20	20	S	s	v.	S	S	S	S	\$	S	5	-	s.	S	\$	-	5	S	\$	5	S	5	s	s	5	S	s	\$	5	20	\$	3	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	l/an			l/gu	l/gu	l/gu	I/8n	I/gn	I/gn	Van	V8n	l/gu	Vgn	I/gu	l/gu	l/gn	∥gn	1/gn	l/gn	l/gu	l/gu	l/gu	l∕gu .	l/gn	l/gu	ne ug/l	l/gu	l/gn	l/gu	ne ug/l	l/gu	√Sn.	l/gn	1/gn	ug/I	l/gu	
COL		4-Chloroaniline	4-Chlorophenyl phenyl ether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(ghi)perylene	Benzo(k)fluoranthene	Butyl benzyl phthalate	Chrysene	Di-n-butyl phthalate	Di-n-octyl phthalate	Dibenzo(a,h)anthracene	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-c,d)pyrene	Isophorone	N-Nitrosodi-N-Propylamine	N-Nitrosodiphenylamine	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

MW5 PC-CG3-MW5-GW4 08/26/93	RESULT QUAL	S U			. Z		43.10 OB	35 U	4 U	D 4	ו	1	3 C	3 (	3 8	8 2	4 U	4 t	2 U	2 UL	0.20 U	0.20 U	18 U	18 U	3 (	3 O	4	4 U	3 OF	3 UL	8.80 OB				
74-GW4 33	QUAL	D	n	Þ	<b>A</b>		D	ם	Þ	D	n	Ω	ם	ם	ם	ם	Ω	D	n	Τn	n 0	<b>D</b> 0	D	D		Þ	Þ	n	Π	JD.	0 OB			11	
MW4 PC-CG3-MW4-GW4 08/25/93	RESULT	ν.	\$	· <b>v</b> o	2		35	35	4	4	-	-	m	m	∞	∞	4	4	7	7	0.20	0.20	18	18	4.40	8	4	4	က	e	6.80	23.80		0.25	
3-GW4	QUAL	ב	n	o D	<u> </u>		D	n	Ω	D	n	Ω	ח	Ω	Ω	Ω	0B	ח	D	n	D (	n (	Ω	Ω	n	n	D	D	UL UL	'n		08		1	
MW3 PC-CG3-MW3-GW4 08/25/93	RESULT	w.	٧.	ı vo	2 ,		35	35	4	4		-	n	m	•	∞	5.30	4	2	7	0.20	0.20	81	18	3	3	4	4	e	9	18.50	\$		200	4
2-GW4	QUAL	Þ	ם	ם ח	Ω.		n	n	n	Ω	n	Ω	n	n	ח	n	D	n	n	ח	n	D	Ω	ב	Ω	Ω	n	Ω	nr	'n	n	<b>9</b> 0		<b>A</b>	
MW2 PC-CG3-MW2-GW4 08/25/93	RESULT	٧,	٧.	, <b>v</b> r	m		35	35	4	4	_	_	m	m	•	•	4	4	7	2	0.20	0.20	18	81	Э	3	4	4	3	33	4	12.70		0	
-GW4	QUAL	Ω	Ω	ם ס			n	ח	Ω	Ω	Ω	Ω	n	Ω	D	n	ם	ם	n	C		ח	O	D	n	n	D	D	ď	ď	ח	Ω		<b>a</b>	
MW1 PC-CG3-MW1-GW4 08/15/93	RESULT	v	v	, v	0.90		35	35	4	4	-	-	m	m	œ	œ	4	4	7	7	0.20	0.20	18	18	<b>.</b>	ĸ	4	4	e	3	4	4		08.1	20:-
-GW4	QUAL	Ω	1	) D	, α		D	ם	כ	n	ח	ם	ב	Ω	D	ם	ח	C	ù,	Π	D	n	n	D	0 <b>B</b>	'n	ח	D	'n	Π		<b>@</b>		=	•
MW7 PC-MP2-MW7-GW4 09/09/93	RESULT	٠,	. ~	, vr	m		35	35	4	4	_		m	۳.	œ	<b>∞</b>	4	5.70	7	7	0.20	0.20	18	18	3.20	m	4	4	m	8	23.80	4.10		25.0	3
LOCATOR: SAMPLE ID: 1 COLLECTION DATE:	UNITS:	Pyrene	methoxylmethane		2	METALS	Antimony ug/l	Dissolved		Dissolved		Dissolved		Dissolved		Dissolved		Dissolved		Dissolved		. Dissolved		Nickel, Dissolved	Selenium ug/l	Selenium, Dissolved ug/l		Silver, Dissolved		Thallium, Dissolved		Dissolved	•	1PH Total Permissin Hydroxadonis morft	

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

2 V2-GW4 93	QUAL																																					
MW2 PC-TF4-MW2-GW4 08/11/93	RESULT																						÷															
8-GW4	QUAL	:	<b>:</b>	<b>&gt;</b> :	<b>&gt;</b>	>	Þ	Þ	Þ	ם	n	ם	D	ם	D	n	D :	n (	Ü.	D !	D !	D :	D .	D (	D (	D	D (	n (	O .	<b>D</b>	<b>D</b> (	0 0	<b>n</b> (	<b>.</b>	<b>n</b> 0	<b>D</b> 0		
MW8 PC-TF4-MW8-GW4 08/17/93	RESULT	96.0	6.0	CC.0	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.35	0.30	0.40	0.45	0.50	0.05	0.30	0.30	0.55	
1-GW4 )3	QUAL	£	Κ.	¥ .	≃ .	<b>x</b>	~	~	~	~	~	~	~	~	≃.	~	∝	~	~	~	~	∞	~	~	~	œ	~	~	~	~	~	~	~	~	24	~	<b>~</b>	
MW1 PC-TF4-MW1-GW4 08/17/93	RESULT	£	<b>4</b> 6	<b>×</b> ,	≃ .	<b>x</b>	<b>~</b>	~	<b>x</b>	<b>x</b>	~	₩	~	2	~	×	~	~	~	<b>x</b>	~	2	~	~	<b>x</b>	~	~	8	~	~	<b>x</b>	24	~	~	~	~	∝	
7-GW4	QUAL	:	<b>:</b>	<b>&gt;</b> :	<b>D</b>	Þ	D	D	n	D	Ω	Ω	Ω	D	Ω	ח	Ω	Ω	n	ם	n	ם	n	D	D	D	Þ	D		D	ח	n	Ω	æ		Ω		
MW7 PC-CG3-MW7-GW4 09/13/93	RESULT	36.0	25.0	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.63	0.30	0.40	0.45	0.50	0.31	0.30	0.30	0.55	
5-GW4	QUAL	Ė	<b>:</b>	<b>&gt;</b> ;	<b>&gt;</b>	•	D	D	D	Ω	Ω	D	D	Ω	n	Ω	Ω	D	n	n	D	D	Þ	ם	D	Þ	D	Ω	D	D	D		D			D		
MW6 PC-CG3-MW6-GW4 09/10/93	RESULT	92.0	6.0	CC.0	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.35	0.30	0.40	0.45	0.50	0.28	0.30	0.30	0.55	
-GW4	QUAL		2	Ω;	o :	)	n	D	n	Ω	ם	ב	n	ם	n	ם	D	n	כ	ח	Ω	D	Þ	n	D	n	Ω					n		æ			D	
MW9 PC-CG3-MW9-GW4 08/26/93	RESULT	0		0.11	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.14	0.13	0.30	0.40	0.45	0.14	0.35	0.08	0.07	0.55	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	T. T.		1 kg	ľgn -	/gu	V8n ∵	l/ấn	l/gn	l/gu	ng/1	l/gn	l/gn	l/gn	l/gn	l/gu	∏8n	l/gu	l/gu	ug/l	Ng/l	l∕gu	l/gn	l/gu	l/gu	l/gu	√gn	Vgu .	ug/l	l/gu	∪g/l	l/gu	l/gu	√an .	ug/l	l/gu	T/gu	
COLLECT		8010	1 1 1 Tableson	1,1,1-11icholoculaile	1,1,2,2-1 etrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethylene	1,2,3-Trichloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,2-trans-Dichloroethylene	1,3-Dichlorobenzene	1,3-cis-Dichloropropylene	1,3-trans-Dichloropropylene	1,4-Dichlorobenzene	2-Chloroethylvinyl ether	2-Chlorotoluene	4-Chlorotoluene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Dibromochloromethane	Dibromomethane	Methyl bromide	Methyl chloride	Methylene chloride	Tetrachloroethylene	Trichloroethylene	Vinyl chloride	

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

No. 12   N	LOCATOR: SAMPLE ID: COLLECTION DATE:	LOCATOR: SAMPLE ID: TION DATE:	MW9 PC-CG3-MW9-GW4 08/26/93	9-GW4	MW6 PC-CG3-MW6-GW4 09/10/93	6-GW4 3	MW7 PC-CG3-MW7-GW4 09/13/93	7 v7-GW4 93	MW1 PC-TF4-MW1-GW4 08/17/93	l 71-GW4 93	MW8 PC-TF4-MW8-GW4 08/17/93	8 78-GW4 93	MW2 PC-TF4-MW2-GW4 08/11/93	2 W2-GW4 193
The control of the		UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Color   Colo		5	31.0	1	0.41		0.0		~	æ	gament of the control			
Compared	probenzene	ng/l	0.13	<b>=</b>	0.20	-	0.7		<b>~</b>	æ	0.7			
Particular   Particular   Particular   Particular	nyloenzene mohenzene	ug/.	0.20	Þ	0.29		0.2		∝	~	0.7			
State   Stat	hylbenzene	ug/l	•		•		ı.		24	•	1	Ö.	•	
Tenter ug/l 0.15 U 0.15 U 0.15 U R R C 0.15 U R R C 0.15 U R R C 0.15 U C C C C C C C C C C C C C C C C C C	methylbenzene	l/gu	0.50		0.50	n	0.5		٠,		<b>~</b> -			
Ether   ug/l   0.35   U   0.35   U   R   R   0.35   U   R   R   0.25   U   R   R   R   0.25   U	orobenzene	l/gu	0.15		0.15	Þ	0.0		<b>*</b> P	¥ '	5		~	
Ether ug/l 0.35 U 0.25 U R R R 0.25 U U R R R 0.25 U U R R R 0.20 U Ug/l 0.25 U 0.25 U R R R 0.20 U Ug/l 0.25 U 0.25 U R R R 0.20 U Ug/l 0.25 U 0.25 U R R R 0.25 U 0.25 U R R R 0.25 U 0.25 U 0.11 R R R 0.25 U 0.25 U 0.11 R R R 0.25 U	hylbenzene	ug/l		:	, 6		٠ ٥		¥ 0	' <u>c</u>	0.3			
Ether ug/l 0.25 U 1.25 U 0.20 U R R R 0.20 U 1.25 U 0.20 U R R R 0.20 U 1.25 U 0.25 U 0.20 U R R R 0.20 U 0.25 U 0.25 U 0.21 I R R R 0.25 U 0.25 U 0.21 I R R R 0.25 U 0.25 U 0.21 I R R R 0.22 U 0.25 U 0.20 U S U S U S U S U S U S U S U S U S U		l/gu	0.35		0.5				4 04	4 ≃	0			
Ether   ugh   5.40	nzene	l/gu ∫	0.23		0.7				. ex	. ex	0.0	D 03		
ug/l         0.25         U         0.25         U         0.11         R         R         R         0.25         U         0.20         U         0.21         I         0.22         I         0.22         I         0.23         I	sene.	ng/I	0.20		ŕ		·		. ×	<u>~</u>	S	Þ		
ught         0.25         U         5         U </td <td>Butyl Ether</td> <td>ng/1</td> <td>200</td> <td></td> <td>, ,</td> <td></td> <td>o C</td> <td></td> <td>2</td> <td>~</td> <td>0.</td> <td></td> <td></td> <td></td>	Butyl Ether	ng/1	200		, ,		o C		2	~	0.			
ug/l         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5         U         5           ug/l         5         U         5		l/gu	2.0		2,0		Ċ	_	2	2	··0			
ug/l         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5           ug/l         5         U         20         U         20         U         20           ug/l         5         U         5         U         5         U         5           ug/l         5          U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5           ug/l         5         U         5         U         5		ng/l	0.4		4.0		5							
ug/l         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5         U         5         U         5         U         5           ug/l         5         U													•	
ug/l         5         U         5         U         5         U         5           ug/l         5         U         20         U         20         U         20         U         20           ug/l         5         U         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5         U         5           ug/l         5         U         5	chlombenzene	I/an	5	n	S	Ω	5	D	5	כ	<b>S</b>	<b>&gt;</b>	vo i	
ught         20         U         20	ois(1-Chloropropane)	l/an	5	D	5	D	5	D	\$	Þ	S ;	<b>&gt;</b> :	n (	
ug/l         5         U         5         U         5         U         5           ug/l         5         U         5         U         5	chlorophenol	ng/l	20	Ω	20	n	20	D	50	<b>&gt;</b> :	2,	<b>:</b>	2 4	> <b>:</b>
ug/l         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5         U	chlorophenol	l/gu	\$	Ω	5	n	\$	D :	vo i	<b>&gt;</b> :	n 4	<b>&gt;</b> =	, v	
ug/l         5         U         5         U         5         U         5           ug/l         20         U         20         U         20         U         20           ug/l         5         U         5         U         5         U         5           ug/l         5         U         5         U         5	orophenol	l∕gu	S	D	2	ם	so .		<b>^</b> `	<b>&gt;</b>	n <b>v</b>		יי ע	
ug/l         20         U         20	thylphenol	l/gn	S	Ω	\$	D :	e e		v 5	<b>-</b>	י כ		, c	
ne         ug/l         5         U         5 <td>rophenol</td> <td>l/gn</td> <td>50</td> <td><b>:</b></td> <td>70</td> <td><b>&gt;</b>:</td> <td>07</td> <td></td> <td>9 <b>v</b></td> <td>=</td> <td>3 4</td> <td></td> <td>, v</td> <td></td>	rophenol	l/gn	50	<b>:</b>	70	<b>&gt;</b> :	07		9 <b>v</b>	=	3 4		, v	
ug/l         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5           ug/l         5         U         20         U         20         U         20           ug/l         5         U         5         U         5         U         5           ug/l         5         U         5         U         5	rotoluene	l/gn	<b>S</b>	<b>)</b>	<b>α</b> '	<b>)</b> :	n 4		, <b>v</b>	=	, v		• •	
ug/l         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         20           ug/l         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5           ylether         ug/l         5         U         5         U         5         U         5           henol         ug/l         5         U         5         U         5         U         5           henol         ug/l         5         U         5         U         5         U         5	rotoluene	ug/l	s,	<b>)</b> ;	n '	) <b>:</b>	n ¥		. <b>v</b>		, v.		· <b>s</b> c	
ug/l         5         0         3         0         3         0         20           alenc         ug/l         20         U         20         U         20         U         20           ug/l         5         U         5         U         5         U         5         U         5           qzidine         ug/l         5         U         5         U         5         U         5           phenyl ether         ug/l         5         U         5         U         5         U         5           hyl phenol         ug/l         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5           hyl phenol         ug/l         5         U         5         U         5         U         5	naphthalene	ng/l	so i	<b>)</b> :	Λ·	<b>:</b>	ר ע		, <b>v</b>		, v		ν.	
ug/l         20         U         20	phenol	l/gu	SO :	<b>&gt;</b>	^ ;	o ;	r 6		ر د		. 6		20	
ug/l         5         U         5         U         5         U         5           ug/l         5         U         20         U         20         U         20           ug/l         5         U         5         U         5         U         5           ug/l         5         U         5         U         5         U         5           ylether         ug/l         5         U         20         U         20         U         20           viencial         ug/l         5         U         5         U         5         U         5	1-4,6-Dinitrophenol	l/gu	20	•	70	<b>&gt;</b>	97		2				•	
solution         ug/l         5         U         5         U         5         U         20           ug/l         5         U         5         U         5         U         5           cerzidine         ug/l         5         U         5         U         5         U         5           diphenyl ether         ug/l         5         U         20         U         20         U         20           ethyl phenol         ug/l         5         U         5         U         5         U         5	naphthalenc	ug/l	2	D	<b>S</b>	o ;	<b>α</b> '		n 4		v			n
ug/l         20         U         5         U         5         U         5         U         5         U         5         U         5         U         20         U         5 <td>phenol</td> <td>ng/l</td> <td>2</td> <td>D</td> <td>s ;</td> <td><b>)</b></td> <td>n (</td> <td></td> <td>. 6</td> <td></td> <td>, E</td> <td></td> <td>20</td> <td></td>	phenol	ng/l	2	D	s ;	<b>)</b>	n (		. 6		, E		20	
ug/l         5         U         5         U         5         U         5           verzidine         ug/l         5         U         5         U         5         U         5           yl phenyl ether         ug/l         5         U         5         U         5         U         5           ethyl phenol         ug/l         5         U         5         U         5         U         5	niline	l/gu		D ;	20	<b>)</b>	0 <b>7</b>		07		3 4		, w	
ienzidine         ug/l         5         U         5         U         20         U         20           ug/l         20         U         20         U         20         U         20           il phenyl ether         ug/l         5         U         5         U         5           thyl phenol         ug/l         5         U         5         U         5	nenol	l/gu	S.	<b>)</b>	o '	<b>&gt;</b> :	n •		· •		•		•	
ug/l 20 U 20 U 20 C 20 C 20 C 20 C 20 C 20 C	nlorobenzidine	√8n	vo (	<b>)</b>	Λ <del>(</del>	<b>)</b> ;	n e		, c		20		52	Ω
	niline	/gn	50	<b>)</b> ;	97 '	<b>&gt;</b>	07		3 4		,		•,	
	phenyl phenyl ether	l/gu	<b>v</b> o '	<b>D</b> ;	· ·	<b>&gt;</b> ;	n 4		٧ ر		, <b>v</b>		· <b>v</b>	n
	-3-methyl phenol	l/gu	\$	D	•	>	n		,		י		•	

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

MW2 PC-TF4-MW2-GW4 08/11/93	RESULT QUAL	S U	11	2 2	20 11	70 0		2 2 2	2 20	. S	S C C	S U	5 U	5 U	S U	5 U	5 U	s U	5 U	S U	0.50 J	S U			) D :	o:	) )	2	o;	2	o :	o :	o:			o :	S U
	QUAL	D	-	) <b>=</b>	=	) <b>D</b>	=	) <b>=</b>	î D	) D	) D	n	D	ֹם	Þ	כ	ם	D	D	ם	ם	D	ם	'n	D :	Þ ;	<b>D.</b> 1	<b>:</b>	<b>)</b> :	<b>:</b>	<b>)</b> ;	o :	<b>)</b> ;	Þ	<b>:</b>	>	Þ
MW8 PC-TF4-MW8-GW4 08/17/93	RESULT	¥.	•	ı vo	, 5	200	ę v	) <b>v</b>	) <b>V</b>	, <b>v</b> o	a vo	<b>v</b> :	, vo	, v	ν.	ď	S	\$	5	5	5	5	S	<b>S</b>	<b>'</b>	ys '	vo v	so s	'n	vo v	n '	vo v	n '	\$	2,	n '	<b>v</b> ı
1-GW4 33	QUAL	n	=	> =	=	) <b>=</b>	=	<b>&gt;</b> =	<b>&gt;</b> =	) D	n	ם ס	n	n	Þ	Ω	ם	ב	ם	D	Ω	D	D	Ω	D :	<b>&gt;</b> :	<b>D</b> :	<b>&gt;</b> :	<b>)</b> ;	o :	) :	o :	<b>&gt;</b> :	D	<b>)</b> :	<b>-</b>	Q
MW1 PC-TF4-MW1-GW4 08/17/93	RESULT	ν.	•	, <b>v</b>	۰, د	2 2	4	) <b>(</b>	) <b>(</b>	, <b>v</b> r	, v	, vi	, v	Ś	·	S	ς.	S	v.	s	5	\$	5	S.	vo i	vo v	vo i	vo v	n ı	vo v	e i	'n,	<b>ο</b> '	S	, 20	n	08.0
7-GW4 3	QUAL	n	=	=	=	<b>=</b>	) =	o =	<b>,</b> =	ם ג	ה ח	Ω	ם ס	ם ס	n	כ	n	Ω	Ω	Ω	Ω	Ω	Ω	D	n :	D :	) :	<b>D</b> :	<b>)</b>	D :	י כ	<b>&gt;</b> :	<b>&gt;</b> :	Þ	<b>)</b> ;	>	0
MW7 PC-CG3-MW7-GW4 09/13/93	RESULT	<b>~</b>	· •	• •	, c	2 2	2	, v	) <b>V</b>	, <b>v</b> i	, v:	, v	, <b>v</b>	· <b>v</b> o	· <b>v</b> o	·v	5	\$	\$	5	\$	\$	5	<b>જ</b> .	ς,	vo i	S.	<b>v</b> o 1	so i	vo 1	S.	s ·	ς <b>'</b>	5	20	n	0.80
5-GW4	QUAL	Ω	=	=	· =	=	=	o =	) <b>=</b>	<b>&gt;</b> =	ם ס	<b>D</b>	ם	ם ס	n	o ח	Ω	Ω	n	n		Ω	n	n	ם	<b>)</b>	י ר	<b>)</b>	<b>)</b>	<b>&gt;</b> ;	<b>-</b>	<b>D</b> ;	<b>&gt;</b> :	Þ	<b>D</b> :	>	D
MW6 PC-CG3-MW6-GW4 09/10/93	RESULT	v	· •	· •	, c	2 %	3 4	) <b>V</b>	) <b>(</b>	יא נ	·	, v	, vi	'n	· v:	· <b>v</b> o		s	\$	S	0.50	5	5	5	S.	<b>.</b>	<b>S</b>	· 2	<b>S</b>	· ·	S.	vo v	'n	2	, 20	^	<b>~</b>
-GW4	QUAL	Ω	=	<b>=</b>	) <b>=</b>	=	=	o =	>=	<b>&gt;</b>	ם מ	n	ם ס	ם ח	n	· <b>ɔ</b>	Ω	n	n	ח	D	D	D	Þ	ח	n	<b>-</b>	D :	<b>&gt;</b> :	<b>)</b>	<b>&gt;</b>	<b>)</b>	<b>D</b> :	ם	<b>)</b>		<b>m</b>
MW9 PC-CG3-MW9-GW4 08/26/93	RESULT	ν.	· •	•	, 5	2 2	4	) <b>(</b>	) <b>V</b>	) <b>v</b> i	, <b>v</b>	v	, v	, vo	ı v	· <b>v</b> s	8	s	5	s	s	\$	S	S	ς,	vo i	S ,	<b>v</b> o 1	S.	vo v	v i	۰ م <u>۰</u>	ı, u	\$	20	n	0.80
	UNITS:	yon .	\ \text{\tin}\text{\ti}\\\ \text{\text{\text{\text{\text{\text{\text{\text{\tex{\tex		. Per	1 61 1 61	, è	l/gn	1/2/1 110/1	1,80	, V	[/6II	l/an	I/ān	l/an	l/gn	l/gu	/gn	ug/l	l/gn	l/gu	l/gu	l/gn	l/gn	l/gn	l/gu	I/gu	l/gu	ng/l	l/gu	ngn	ng/l	∬an	I/Sn	∏gn	ng/l	ng/I
LOCATOR: SAMPLE ID: COLLECTION DATE:		4-Chlomaniline	4-Chlorophenyl phanyl other	4-Methylphenol	A Nitrospiline	4-Nitrophenol		Acenaphusine Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)ovrene	Benzo(h)fluoranthene	Benzo(ehi)nervlene	Benzo(k)fluoranthene	Butvl henzyl phthalate	Chrysene	Di-n-butyl phthalate	Di-n-octyl phthalate	Dibenzo(a,h)anthracene	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-c,d)pyrene	Isophorone	N-Nitrosodi-N-Propylamine	N-Nitrosodiphenylamine	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

LOCATOR: SAMPLE ID: COLLECTION DATE:	: MW9 : PC-CG3-MW9-GW4 : 08/26/93	9 W9-GW4 /93	MW6 PC-CG3-MW6-GW4 09/10/93	-GW4	MW7 PC-CG3-MW7-GW4 09/13/93	7-GW4 13	MW1 PC-TF4-MW1-GW4 08/17/93	-GW4	MW8 PC-TF4-MW8-GW4 08/17/93	-GW4	MW2 PC-TF4-MW2-GW. 08/11/93	2-GW4 3
UNITS:	: RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Pyrene	Ĭ 5	n	ς.	ם	ν,	n	s.	n	5	n	vs	D
loroethoxy)methane		D	ς.	Ω	v	Ω	S	n	S	D	8	Ω
	1 5	D	\$	Ω	S	D	ĸ	n	S	D	\$	D
2		Ø	7	B	4	æ	5	ם	4		æ	æ
METALS												
Antimony	1 35	D	42.50	08	45	ם	35	n	35	Ω	35	Ω
Dissolved	1 35	Ω	35		35	Ω	53.80	0 <b>B</b>	69.20		35	n
	4	Ω	9.90		4	n	15.60	٦	23	J	4.80	0
Arsenic, Dissolved ug/l	4	n	4	n	4	Ω	4	n	4		4	n
	1	D		O	4	Ω	1.40	0	1.50	0		Ω
Beryllium, Dissolved ug/l	1 1	Ω	_		-	D		n			-	D
Cadmium ug/l	3	Ω	4.60	0	3	ם	3	n	6		3	D
l Cadmium, Dissolved ug/l	3	Ω	3		3	n	æ	D			33	
' Chromium ug∄		n	21.10		10	ם	61.10		67.20		16.5(	
Chromium, Dissolved ug/I		Ω	∞	n	<b>∞</b>	n	<b>∞</b>	Ω	<b>∞</b>	n	<b>•</b>	
Copper ug/l		n	25.40		15	ם	79.90		91.20		18.6	<b>B</b> 0
Copper, Dissolved ug/l		D	4	ח	4	ם	4	D	4	n	4	
Lead ug/l	1 2	n	12.90		2		26.60		62.70		16.40	
ssolved		nr	2	_	7		2	ב	9.40	m	7	ď
Mercury ug/1			0.20		0.20		0.20	ם	0.20		0.20	
Mercury, Dissolved ug/l		70 n	0.20	D	0.20	n (	0.20	ם	0.20	ם	0.20	D (
		D	18.60		35		99		59.60		18	
Nickel, Dissolved ug/l	_	n	18		18		18	D	18	ב	18	
Selenium ug/l		O	17.20		5.3(		m	n	က	Þ	m	•
	3	ΩΓ	æ	ر	2		n	æ	n	m	Ω	
Silver ug/l	4	Ω	4		4	n	4	ם	4	ם	4	
Silver, Dissolved ug/l	4	n	4	<b>&gt;</b>	4	D	4	ם	4		4	
Thallium ug/l	1 3	ם	3	'n	8	ΩΓ	3	'n	9	'n	æ	D
Thallium, Dissolved ug/l			3		3	Б	æ	Π	ю		3	
Zinc	73.20	20 B	55.90		10.90	0	137		163		34.60	•
Zinc, Dissolved ug/l			5.90	<b>@</b>	4		4	D	7.10	0 <b>B</b>	4	ם
<b>10</b>												
Total Petroleum Hydrocarbons mg/l	0.4	40 B	0.80	Ø	0.25	O 2	1.50	æ	0.80	æ	0.25	D 2
		ı										

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

MW3 PC-TF4-MW3-GW4 08/11/93 RESULT QUAL	MW4 PC-TF4-MW4-GW4 08/12/93 L RESULT QUAL	MW1 4 PC-SF5-MW1-GW4 08/15/93 AL RESULT QUAI	1 v1-GW4 93 QUAL	MW2 PC-SF5-MW2-GW4 08/24/93 RESULT QUAI	-GW4	MW2 PC-SF5-MW3-GW4 08/24/93 RESULT QUAL		MW4 PC-SF5-MW4-GW4 08/24/93 RESULT QUAL
U 0.35	v. v	U 0.35	. SS . U	0.35	בכ	0.35	ם ב	0.35
0,0	<b>6</b>	U 0.40	D 04	0.40	ם מ	0.40	n	0.40
U 0	0.25	U 0.25	25 U	0.25	D	0.25	Ω	0.25
5	0.35	U 0.35	35 U	0.35	ב כ	0.35	D :	0.35
o =	0.35	0.35	S S C C	0.35	<b>&gt;</b> =	0.35	<b>)</b> =	0.35
ם	0.35	U 0.35	35 U	0.35	סס	0.35	n	0.35
ū	0.30	U 0.30	n 08	0.30	Ω	0.30	n	0.30
ם	0.25	U 0.25	75 N	0.25	ם	0.25	D	0.25
<b>:</b>	0.30	n	0.30 U	0.30	<b>:</b>	0.30	<b>:</b>	0.30
o :	0.30	0.0	0.30 U	0.30	<b>)</b> :	0.30	<b>&gt;</b> =	0.30
o =	0.20		0.20	0.20	<b>&gt;</b> =	0.20	o D	07.0
ם	0.25	U 0.	0.25 U	0.25	n	0.25	Ω	0.25
n	0.20	.0 0.	0.20 U	0.20	n	0.20	n	0.20
n:	0.40	n 0	0.40 U	0.40	D:	0.40	o:	0.40
<b>5</b> 5	0.25	0.0	0.25 U	0.25	ם ב	0.25	<b>&gt;</b> =	0.25
o 🗅	0.85	0	0.85 U	0.85	o	0.85	o	0.85
ם י	0.25	U 0.	0.25 U	0.25	Þ	0.25	D	0.25
D	0.40	U 0.	0.40 U	0.40	D	0.40	Ω	0.40
ם	0.50	U 0.	0.50 U	0.50	D	0.50	D	0.50
ם	0.35		0.35 U	0.35	D	0.35	n	0.35
n	0.35	0	0.35 U	0.35	D	0.35	n	0.35
Ω	0.50	0	0.50 U	0.50	n ·	0.50	ה י	0.50
D:	0.35		0.35 U	0.35	: כ	0.35	o:	0.35
ב ב	0.30	O	0.30 U	0.30	<b>D</b>	0.30	Þ	0.30
n	0.40	u 0.	0.40 U	0.40	D	0.40	D	0.40
Ω	0.45	U 0.	0.45 U	0.45	Ω	0.45	ם	0.45
n	0.50	.0 U	S0 U	0.50	D	0.50	Ω	0.50
	90.0	Ö	0.03	0.11	m	0.31		0.44
n	0:30	.0 O.	0.30 U	0.30	D	0.30	Ω	0.30
C C	0.30	O O	0.30 U	0.30	Þ	0.30	D	0.30
n	22.0	O O	55 U	0.55	ר	0.55	D	0.55

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

GW4	QUAL	<b>~</b>	ם	D		n	Þ		ם	ם	B	D	ם	<b>m</b>	;	Þ	D	D	Þ	D	D	ם	D	D	ם	D	ם	ם	D	Þ	Þ	n	ם	Þ	D	
MW4 PC-SF5-MW4-GW4 08/24/93	RESULT	0.28	0.20	0.20	•	0.50	0.15	•	0.35	0.25	0.10	\$	0.25	0.23	•	S	s	20	5	S	ν,	70	<b>S</b>	٠c	v.	s.	20	٠	S	20	s.	S	20	w	5	
GW4	QUAL	=	) )	D		D	D		Þ	ב	Þ	Þ	Þ	æ	:	Þ	ם	ם	ם	ם	ב	ם	D	ם	ם	ם	Þ	D	Þ	ב	D	Þ	Þ	n	D	
MW2 PC-SF5-MW3-GW4 08/24/93	RESULT	<b>\$</b> 1 0	0.20	0.20	•	0.50	0.15	•	0.35	0.25	0.20	s	0.25	0.11	,	v.	S	20	ν.	2	S	70	\$	vs	ν	S	20	\$	S	20	S	S	20	\$	<b>S</b>	
3W4	QUAL	æ	2 5	n		D	ם		ם	ם	В	D	D	8		ם	ם	D	D	n	כ	ם	ם	ם	ב	n	ם	ם	ם	ם	ם	D	ם	D	ם	
MW2 PC-SF5-MW2-GW4 08/24/93	RESULT Q	000	0.20	0.20	•	0.50	0.15	•	0.35	0.25	0.00	S	0.25	0.14		5	S	20	5	5	5	70	\$	5	5	5	70	S	S	70	\$	S	50	s	\$	
tW4	QUAL			-						ь,		D	-	В		n	D	D	n	ם	-	n	Ω	n	n	D	ם	n	n	ם	n	n	ח	Ω	D	
MW1 PC-SF5-MW1-GW4 08/15/93	RESULT Q	4 70	0.88	2.90	<b>∞</b>	•	3.50	<b>&amp;</b>	52	0.41	89.0	S	1.50	0.11		15	15	09	15	15	4	09	15	15	15	15	09	15	15	09	15	15	09	15	15	
3W4	QUAL	۵	2 0	м			æ		D	ם		ם	D	B		n	D	D	Þ	ם	n	Ω	Ω	כ	ם	ב	Þ	ם	ם	D	D	ם	n	D	ם	
MW4 PC-TF4-MW4-GW4 08/12/93	RESULT C	-	0.20	0.07	0.07	•	0.07	0.02	0.35	0.25	0.10	5	0.25	0.11		\$	5	20	\$	sc.	\$	20	5	5	\$	2	70	\$	s	20	5	s.	70	S	S	
3W4	QUAL	=	<b>-</b>	כס		n	Ω		ם	ם	ם	n	D	ב		ם	ח	ח	ם	ם	D	n	ם	D	n	ח	ם	D	D	D	n	ם	D	Ω	n	
MW3 PC-TF4-MW3-G 08/11/93	RESULT	31.0	0.10	0.20	1	0.50	0.15	•	0.35	0.25	0.20	5	0.25	0.29		5	s	20	5	5	\$	70	S	S	s	s	50	\$	νς.	20	s	S	70	S	\$	
LOCATOR: SAMPLE ID: TION DATE:	UNITS:		20 10 20 11	. 78a	l/au	/8n	l/gu	l/gu	l/gn	l/gu	l/gu	ug/1	ug/l	l/gu		l/gu	l/gn	l/gn	l/gu	l/gu	l/gu	ug/l	l/gn	l/gn	l/gu	l/gn	I/an	l/gn	l/gn	l/gu	Vgu .	l/an	I/gn	ug/I	/gn	
LOCATOR: SAMPLE ID: COLLECTION DATE:			, d	) .	Ð	zene		•								ene	opropane)	o	lo						63		ophenol	•				ine		nyl ether	openol	
		8020	1.2-Diemonobenzene	1,3-Dichlorobenzene	1.3-Dimethylbenzene	1,3/1,4-Dimethylbenzene	1,4-Dichlorobenzene	1,4-Dimethylbenzene	Benzene	Chlorobenzene	Ethylbenzene	Methyl-t-Butyl Ether	Styrene	Toluene	LCNBA	1,2,4-Trichlorobenzene	2,2"-Oxybis(1-Chloropropane)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methyl-4,6-Dinitrophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3.3'-Dichlorobenzidine	3-Nitroaniline	4-Bromophenyl phenyl ether	4-Chloro-3-methyl phenol	

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

LOCATOR: SAMPLE ID: COLLECTION DATE:		MW3 PC-TF4-MW3-GW4 08/11/93	GW4	MW4 PC-TF4-MW4-GW4 08/12/93	LGW4	MW1 PC-SF5-MW1-GW4 08/15/93	-GW4	MW2 PC-SF5-MW2-GW4 08/24/93	-GW4	MW2 PC-SF5-MW3-GW4 08/24/93	3-GW4	MW4 PC-SF5-MW4-GW4 08/24/93	4-GW4 3
UNI	UNITS:	RESULT (	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Pyrene	l/gn	5	n	S	Ω	15	Þ	S	ם	ĸ	D	S	n
bis(2-Chloroethoxy)methane	l/gn	s.	ם	S	Ω	15	D	5	n	\$	D	\$	D
	ng/l	s	ם	5	ם	15	Þ	S	Ω	\$	Þ	\$	Ω
bis(2-Ethylhexyl)phthalate	l/gu	7	m	0.90		e	В	_	ш	==	æ	7	æ
METALS													
	ng/l	84.60	Ø	35	D	35	Ω	35	Ω	35	Ω	35	n
, Dissolved	l/gn	35	ם	36.20	0	49.90	08	35	n	35	Ω	35	ם
	ug/l	19		4	D	20.50		4	Ω	4	D	4	D
Arsenic, Dissolved	ng/l	4	n	4	n	22.10	æ	4	n	4	Þ	4	D
Beryllium	l∕gu	2.90	щ	-	ם		ם	_	D	-	D	-	D
Beryllium, Dissolved	l/gn	-	Ω	1	n	_	D	-	D	-	Ω	-	D
	l/gn	8.10		æ	n	4.70	() <b>B</b>	8	D	æ	Ω	3	D
Cadmium, Dissolved	ng/l	3	ם	æ	D	3	כ	3	D	3	Ω	3	D
	ug/l	88		23.30		∞	D	<b>&amp;</b>	ם	•	D	∞	Ω
Chromium, Dissolved	ng/l	<b>∞</b>	n	<b>&amp;</b>		•	Ω	<b>&amp;</b>		∞	Ω	œ	D
	ng/l	120		22.50	0 <b>B</b>	4	n	5.90	_	-	ח	4	D
Copper, Dissolved	ug/l	4	Ω	4		4	D	4	n	4	D	4	Þ
	ug/l	50.60		17.60	_	6.50		7	'n	7	D	7	D
ssolved	ug/I	7	ם	3.10		7	Þ	7		7	∍	7	-
	ng/l	0.20	ם	0.20	n	0.20	כ	0.20		0.20		0.20	n
y, Dissolved	l/gu	0.20	ם	0.20	n	0.20	D	0.20		0.20		0.20	
	√gn	90.50		18	D	18	Þ	18	Þ	18	n	81	<b>)</b>
issolved	ug/l	<u>8</u>	<b>&gt;</b> ;	18	<b>-</b> :	<u>8</u>	<b>&gt;</b> :	81	<b>&gt;</b> ;	<u>∞</u> '	<b>:</b>	∞ '	<b>:</b>
	ng/I	<b>n</b> (	<b>&gt;</b> ;	. O	OF OF	<b>.</b>	<b>)</b>	n 1	<b>&gt;</b>	<b>n</b> (	<b>&gt;</b> :	n (	<u>:</u> د
m, Dissolved	ng/I	. n	J ;	. n	⊃ :	·n ·	<b>)</b>	. o.	70 :	<b>.</b>	<b>&gt;</b> :	. r	3:
	ng/I	4	)	4	>	4	>	4	<b>&gt;</b>	4	<b>&gt;</b>	4	<b>)</b>
ssolved	l/gn	4	Þ	4	n	4	<b>-</b>	4	<b>-</b>	4	Þ	4	Þ
	ng/l	m	ď	n	'n	m	'n	က	n <b>r</b>	<b>6</b>	ď	m	'n
um, Dissolved	ng/I	က	ΛΓ	6	ď	e		33	<b>-</b>	e	ď	m	ď
Zino	ng∕l	246		61.30		14.80	0 <b>B</b>	33.60	<b>m</b>	74.50		13	
Zinc, Dissolved	l/8n	4	ם	4	ם	4.20		27.90		83.50	_	65.30	
HOL													
Petroleum Hydrocarbons	mg/l	1.10	æ	2.10	æ	5.80	Ø	1.70	M	3.80	B (	0.25	D 9

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

W4	QUAL	=	<b>&gt;</b> :	<b>&gt;</b> :	Þ	n	D	ם	n	Ω	D	Ω	n	Ω	ם	ב	ם	n	Ω	n	n	D	ם	ם	D	ח	ם	Þ	D	ם	ב	ם	ם		ם	ם	Ω
MW1 F6-MW1-G\ 08/12/93		36	6.0	C	0.40	0.25	9.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.35	0.30	0.40	0.45	0.50	80.0	0.30	0.30	0.55
MW1 PC-LF6-MW1-GW4 08/12/93	RESULT			ٔ ب	_	_	_	_	_	•	•	J	Ū	J	•	•	•	•	•	•	•	•			•	_											
GW4	QUAL	=	<b>:</b>	<b>&gt;</b> :	ב <sup>י</sup>	ם	Þ	Ω	D	D	D	ח	D	ם	ח	Þ	ם	D	D	ם	D	Þ	n	ם	D	D	כ	Þ	Þ	D	ם	ם	ם	8	ח	D	Ω
MW9 PC-SF5-MW9-GW4 09/13/93	RESULT	38	0.53	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.35	0.30	0.40	0.45	0.50	0.30	0.30	0.30	0.55
3W4	QUAL	=	<b>:</b>	>	ם	D	ם	Ω	D	n	n		D	ם	n	n	Ω	D	ם	D	n	ם	ם	ם	n	D	ם	ח	D	D	n	כ	n	Ω	Þ		ם
MW8 PC-SF5-MW8-GW4 09/13/93	RESULT	38	0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.44	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.35	0.30	0.40	0.45	0.50	0.28	0.30	0.63	0.55
W4	QUAL	=	<b>:</b>	>	n	D	ב	ם	n	n	n	D	ם	ב	ח	ם	ם	n	Ω	D	n	D	D	D	ח	ם	ם	ם	ם	ח	ם	D	n	Ø	n		Ω
MW7 PC-SF5-MW7-GW4 09/12/93	RESULT Q	35	0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.35	0.30	0.40	0.45	0.50	0.39	0.30	0.21	0.55
3W4	QUAL	Ξ	<b>:</b>	>	Þ	D	Ω	n	D	n	n	D	Ω	n	ם	n	Ω	Þ	ם	ם	n	ם	Ω	n	n	ח	ר	n	ם	n	Ω	ם	Ω	_	Þ	Þ	n
MW6 PC-SF5-MW6-GW4 09/12/93	RESULT	38	50.0	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0:30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.35	0.30	0.40	0.45	0.50	0.45	0.30	0.30	0.55
3W4	QUAL	=	۽ د	Δ.	כ	D	ם	D	כ	Ω	Ω	n	ם	n	Ω	D	ם	n	D	ח	Ω	D	ם	D	Ω	n	n	n	B	ם	ם	ם	n	<b>2</b> 0	n	ח	Ω
MW5 PC-SF5-MW5-GW4 09/12/93	RESULT C	0.35	0.53	0.08	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.17	0.30	0.40	0.45	0.50	0.74	0.30	0.30	0.55
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	3	າ ຂີ້ ກ	ng/I	l/gu	ng/l	Ugn ∵	l/gn	l/gn	I/gu	I/gu	l∕gu .	l/gn	ug/1	l/gu	l/gn	I/gu	l/gn	l/gn	l/gn	l/gn	l∕gu	l/gn	ng/l	l/gn	l/gu	l/gn	ng/l	l/gn	1/gn	ug/1	l/gu	I/Sn	l/gu	I/ẩn	1/gn	l/gu
COLLE		8010	1,1,1,1-1 ettachiologualle	1,1,1-1 nenioroemane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethylene	1,2,3-Trichloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,2-trans-Dichloroethylene	1,3-Dichlorobenzene	1,3-cis-Dichloropropylene	1,3-trans-Dichloropropylene	1,4-Dichlorobenzene	2-Chloroethylvinyl ether	2-Chlorotoluene	4-Chlorotoluene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Dibromochloromethane	Dibromomethane	Methyl bromide	Methyl chloride	Methylene chloride	Tetrachloroethylene	Trichloroethylene	Vinyl chloride

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

NAME   PACSES-ANWS-GW4   PAC	MWI PC-LF6-MW1-GW4 08/12/93 RESULT QUAL	0.86 B 0.20 U 0.20 B - 0.50 U 0.19 B - 0.35 U 0.25 U 0.20 U 5 U 0.20 U 0.20 U 0.20 U	20 20 20 20 20 20 20 20 20 20 20 20 20 2
Decator:   MWS   PC-SFS-MW6-GW4   PC-SFS-MW7-GW4   PC-SFS-MW8-GW4   PC-SFS-MW7-GW4   PC-SFS-MW8-GW4   PC-SFS-MW7-GW4   PC-SFS-MW8-GW4   PC-SFS-MW8-GW4   PC-SFS-MW8-GW4   PC-SFS-MW8-GW4   PO-SFS-MW8-GW4   PC-SFS-MW7-GW4   PC-SFS-MW8-GW4   PC-SFS-MW8-GW4   PC-SFS-MW7-GW4   PC-SFS-MW8-GW4   PC-S	.1		5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
DCATOR:   MW5	1		5 U 5 C U C C C C C C C C C C C C C C C
LOCATOR: MW5			20 C C C C C C C C C C C C C C C C C C C
LOCATOR: MW5  SAMPLE ID: 09/12/93  UNITS: RESULT QUAL  UG/I 0.20 U  UG/I 0.54  UG/I 0.54  UG/I 0.50 U  UG/I 0.54  UG/I 0.54  UG/I 0.54  UG/I 0.54  UG/I 0.54  UG/I 0.55  UG/I 0.25  UG/I 0.			20 20 20 20 20 20 20 20 20 20 20 20 20 2
LOCATOR: SAMPLE ID: PC- TION DATE: UNITS: RE UGA! UGA! UGA! UGA! UGA! UGA! UGA! UGA!	5-GW4 13 QUAL		
	P.C.		
8020 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,3-Dichlorobenzene 1,3-Dichlorobenzene 1,3-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dimethylbenzene 1,4-Dimethylbenzene 1,4-Dimethylbenzene Benzene Chlorobenzene Ethylbenzene Methyl-t-Butyl Ether Styrene Toluene 1,2-4-Trichlorophenol 2,4-5-Trichlorophenol 2,4-5-Trichlorophenol 2,4-Dimitrophenol 2,4-Dimitroph	S, COLLECTI	2.Dichlorobenzene 2.Dichlorobenzene 3.Dichlorobenzene 3.J.A.Dimethylbenzene 3.1,4.Dimethylbenzene 4.Dichlorobenzene 4.Dichlorobenzene 6.4.Dimethylbenzene inhlorobenzene ienzene hlorobenzene ichylbenzene ichylbenzene ichylbenzene oluene	1.2.4-Trichlorobenzene 2.2Oxybis(1-Chloropropane) 2.4.5-Trichlorophenol 2.4.6-Trichlorophenol 2.4-Dimethylphenol 2.4-Dimitrophenol 2.4-Dimitrophenol 2.4-Dimitrophenol 2.4-Dimitrophenol 2.4-Dimitrophenol 3.4-Dimitrophenol 3.4-Dimitrophenol 3.4-Dimitrophenol 3.3-Dichlorophenol 3.3-Dichlorophenol 3.3-Dichlorobenol 3.3-Dichlorobenol 3.3-Dichlorobenol 3.3-Dichlorobenol 3.3-Dichlorobenol 3.3-Dichlorobenol 3.3-Dichlorobenol 3.3-Dichlorobenol 3.3-Nitropaniline

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

100	LOCATOR:	MW5		9MM		MW7		MW8		WW Start		MWI	
SAMPLE ID: COLLECTION DATE:	SAMPLE ID: TION DATE:	PC-SF3-MW3-GW4 09/12/93	3-GW4	PC-SF3-MW6-GW4 09/12/93	3 3 3	PC-SF3-MW /-GW4 09/12/93	7-GW4 93	PC-SF5-MW8-GW4 09/13/93	8-GW4 3	PC-SF3-MW9-GW4 09/13/93	9-GW4 13	PC-LF6-MW1-GW4 08/12/93	1-GW4 33
4	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloroaniline	l/gu	v	ם	\$	Ω	s.	D	S	D	ĸ	D	ν,	n
4-Chlorophenyl phenyl ether	l/gn	S	Ω	\$	Ω	S	Ω	S	ם	\$	ח	S	ח
4-Methylphenol	l/gn	S	Ω	s	Ω	S	Ω	\$	ב	S	Þ	S	D
4-Nitroaniline	l/gn	20	Ω	20	n	20	Ω	20	Ω	20	D	20	Þ
4-Nitrophenol	√gu _	20	Ð	20	Ω	20	Ω	20	n	20	D	20	D
Acenaphthene	l/8n	5	ם	ν	n	S	n	\$	ם	\$	D	\$	ם
Acenaphthylene	l/gn	2	n	s	Ω	5	Ω	S	D	ĸ	Þ	νo	Ω
Anthracene	l/gn	5	n	s.	Ω	S	Ω	S	D	\$	D	S	D
Benzo(a)anthracene	ng/l	5	Þ	s	Ω	s.	n	5	D	s.	n	v:	n
Benzo(a)pyrene	Vän	s.	Ω	νς.	Ω	S	D	\$	ב	\$	Ω	S	Ω
Benzo(b)fluoranthene	l/gn	\$	D	S	ם	\$	D	\$	D	S	D	5	n
Benzo(ghi)perylene	l/gn	S	n	s.	ב	\$	ם	S	D	S	n	\$	D
Benzo(k)fluoranthene	l/gn	5	n	S	Ω	8	Ω	8	Ω	٧٢	D	v	n
Butyl benzyl phthalate	l/gn	5	Ω	s	Ω	κċ	Ω	S	Ω	v	Ω	S	Ω
Chrysene	l/gn	S	n	S	Ω	5	ח	S	Ω	v	Ω	S	Ω
Di-n-butyl phthalate	l/gn	5	n	5	n	S	ם	0.50	0	0.50		S	Ω
Di-n-octyl phthalate	l/gn	s	Ω	\$	n	5	Ω	S	Ω	\$	Ω	S	n
Dibenzo(a,h)anthracene	l/gn	S	n	\$	Ω	5	D	S	Ω	ν,	D	S	D
Dibenzofuran	ug/l	S	Ω	\$	Ω	S	Þ	\$	Ω	\$	ם	\$	ם
Diethyl phthalate	l/gn	S	Ω	09.0	_	0.50	0	v	Ω	S	Ω	\$	כ
Dimethyl phthalate	l/gu	S	ח	\$	D	Ś	ח	S	Ω	v.	D	S	ם
Fluoranthene	l/gu	S	D	5	D	5	D	S	n	ν,	D	5	ם
Fluorene	l/gn	5	n	5	Þ	5	Ω	S	Ω	s.	n	5	n
Hexachlorobenzene	ug/l	5	n	s	n	5	n	\$	Ω	S	D	5	D
Hexachlorobutadiene	l/gn	\$	D	\$	Ω	5	Ω	5	Ω	ν.	Ω	5	n
Hexachlorocyclopentadiene	l/gn	\$	n	s	Ω	5	Ω	\$	ח	\$	Ω	5	ב
Hexachloroethane	l/gn	5	n	5	Ω	S	n	\$	Ω	\$	ם	5	n
Indeno(1,2,3-c,d)pyrene	l/gn	5	n	5	n	5	n	5	n	2	D	\$	D
Isophorone	l/gn	5	n	\$	n	S	Ω	\$	D	<b>S</b>	D	\$	D
N-Nitrosodi-N-Propylamine	l/gu	S	n	s	n	5	Ω	5	D	35	Ω	5	ם
N-Nitrosodiphenylamine	l/gu	5	ח	s.	Ω	S	Ω	5	Þ	\$	ם	5	n
Naphthalene	ng/I	\$	D	S	n	S	Ω	5	Þ	ν.	מ	S	Ω
Nitrobenzene	V8n	S	Þ	5	D	5	n	5	Ω	s,	n	\$	Ω
Pentachlorophenol	I/Bn	20	Þ	20	D	20	D	20	D	20	D	20	Ω
Phenanthrene	1/gn	5	D	\$	D	5	D	5	D	S	ם	S	n
Phenol	l/gu	\$	Þ	\$	ם	s.	D	v	n	0.50	<b>B</b> 0	S	D

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

MW1 V4 PC-LF6-MW1-GW4 08/12/93	QUAL RESULT QUAL		<b>v</b> n	u s u	В 2		35 111			J 4	0B 4	UL 1	U 1	UL 3	U 3	L 8	n 8	4	U 4	L 2		UL 0.20		_	U 18	UL 3	3 U	UL 4	U 4	60	u 3 UL	4	4			U 1.60	
MW9 PC-SF5-MW9-GW4 09/13/93	result qu	n '	s.	5	ဗ		45	£ ;	35	10.50	4.50	4		v	m	81.70	<b>∞</b>	73.30	4	44.10	7	0.20	0.20	06.69		m	30		4	ю	6	259	38.60			0.25	
MW8 PC-SF5-MW8-GW4 09/13/93	RESULT QUAL		5 U	S U	2 B				35 O		4.20 OB	4 U	1 Q	5 U	3 O	10 U	Ω 8	15 U	. 4 U	2 UL						3 O.L			4 U		3 UJ		61	1		0.25 U	
MW7 PC-SF5-MW7-GW4 09/12/93	RESULT QUAL	S C	5 U		3				35 OL	4 U	4 UL	1 U	In	1	3 111	) ×	8 111.	4 4	4 111		_	20	_	3	18 OL	20	_		4 UL			20				1 B	
MW6 PC-SF5-MW6-GW4 09/12/93	RESULT QUAL		5 U				•		35 U	4.30 0	D 4	n	11			80		0				5				_					_	9				1.10 B	
MW5 PC-SF5-MW5-GW4 09/12/93	RESULT QUAL	S U	D 8		. 4	-		.50	35 U	4 U	4 UL	1	-					Q.			-	ç		0 07.0		05.6	. ~			_		2		,		0.30 B	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	Pyrene ug/l	hovvimethane					Antimony ug/l	Antimony, Dissolved ug/l		Dissolved			Dissolved		Dissolved		m, Dissolved		er, Dissolved		ssolved		Mercury, Dissolved ug/1			Discolused		Despired			Inalmum, Dissolved		Zinc, Dissolved	HOLL	Total Petroleum Hydrocarbons mg/l	

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

4	Ä	=	, D	D	n	n	n	n	Ω	n	n	D	n	n	n	n	Ω	ם	n	ם	n	ם	n	n	ח	Ω	n	D	ם	ב	ב	n	Ø	ם	D	Þ	
8 V8-GW. 93	QUAL	v	, <b>v</b>	o	Š	Š	35	35	5	0	3.	2	2	0	90	25	20	ð	52	35	35	25	<b>\$</b>	20	35	35	0.50	0.35	0.30	0.40	0.45	0.50	0.42	0.30	0.30	0.55	
MW8 PC-LF6-MW8-GW4 09/08/93	RESULT	\$£ 0	0.35	0.4	0.25	0.35	0.35	0.35	0.3	0.30	0.7	0.30	0.3	0.20	0.3	0.25	0.20	0.40	0.25	0.35	0.85	0.0	0.40	0.50	0.35	0.35	0.0	0	0.	ò	ò	0	ò	0	o	.0	
3W4	QUAL	=	) Þ	ם	D	D	D	D	ם	Þ	Þ		ב	n	D	ם	Ω	n	n	ם	n	ר	Þ	Þ	Þ	Þ	ח	כ	D	D	n	D	Þ	D	כ	D	
MW6 PC-LF6-MW6-GW4 09/12/93	RESULT	0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.25	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.35	0.30	0.40	0.45	0.50	0.21	0.30	0.30	0.55	
W4	QUAL	E	3 3	ם	Ω	m	'n	n	D	Б	ם	D	5	n	5	D	n	ס	5	5	D	5	D	Þ	Þ	ם	5	5	Ω	5	n	5	B	n	5	Б	
MW5 PC-LF6-MW5-GW4 09/12/93	RESULT Q	0 35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.35	0.30	0.40	0.45	0.50	0.35	0.30	0.30	0.55	
		=	) D	ם	n	Ω	Ω	n	D	ם	n	Ω	Ω	n	Ω	n	n	Ω	Ω	n	n	n	Ω	n	ם	Ω	Ω	ם	ם	ח	Ω	Ω	8	n	n	ם	
MW4 F6-MW4-GW 09/12/93	QUAL	. 35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.35	0.30	0.40	0.45	0.50	0.34	0.30	0.30	0.55	
MW4 PC-LF6-MW4-GW4 09/12/93	RESULT	c	• •	0	0	0	0	0	0	0	0	0	0	0	0	J	_	_	Ü	_	J	_	J	Ū	Ŭ	•	J	J	•		•		•	_			
GW4	QUAL	=	) <b>)</b>	ם	D	Ω	n	Ω	n	Ω	n	D	ח	Ω	D	n	Ω	ם	ם	Ω	n	D	ח	D		ם	n		ח	Ω	ס	n	D	D		Ω	
MW3 PC-LF6-MW3-GW4 08/26/93	RESULT	35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	1.10	0.35	0.50	0.14	0.30	0.40	0.45	0.50	0.17	0.30	1.70	0.55	
3W4	UAL	=	ם כ	ם	D	ם	n	Ω	Ω	Ω	Ω	n	Ω	n	ח	Ω	D	D	n	Ω	D	n	D	n	D	D	n	D	Ω	D	ם	D		ם	D	ם	
MW2 PC-LF6-MW2-GW4 08/11/93	RESULT Q	35 0	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0:30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.35	0.30	0.40	0.45	0.50	0.03	0.30	0.30	0.55	
	UNITS:	5	. es.	ug/I	ug'l	l/gn	ng/l	ng/l	l/gn	ng/l	l/gn	l/gn	ug/l	ug/l	√gn	l/gu	l/gn	l/gn	ug/l	l/gu	ng/l	l/gn	l/gn	l/gn	ng/I	ng/J	l/gn	l/gn	ug/l	ug/l	l/gu	l/gu	l/gu	/gn	ug/l	ng/l	
LOCATOR: SAMPLE ID: TION DATE:	5																																				
LOCATOR: SAMPLE ID: COLLECTION DATE:		6 6	ì	ane	ं ; : - - - - ( ) :			. •					lene		lene	ylene		ier					ø						ୁଥ		1.67						
O		Alocoods Alocoods	oethane	hloroeth	oethane	hane	hylene	opropan	thane	enzene	lhane	ropane	loroethy	enzene	ropropy	loroprof	enzene	vinyl eth	92	ne L	e)	nethane	omethan		hloride				omethar	ane	ಕಿ	qe	loride	hylene	lene	6)	
		8010	1.1.1-Trichloroethane	.1.2.2-Tetrachloroethane	1,1,2-Trichloroethane	,1-Dichloroethane	, 1-Dichloroethylene	.2,3-Trichloropropane	,2-Dibromoethane	,2-Dichlorobenzene	,2-Dichloroethane	,2-Dichloropropane	,2-trans-Dichloroethylene	,3-Dichlorobenzene	,3-cis-Dichloropropylene	,3-trans-Dichloropropylene	,4-Dichlorobenzene	2-Chloroethylvinyl ether	2-Chlorotoluene	4-Chlorotoluene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Dibromochloromethane	Dibromomethane	Methyl bromide	Methyl chloride	Methylene chloride	Tetrachloroethylene	Trichloroethylene	Vinyl chloride	
		8010	1.1.1	1.1.2.	1,1,2-	1,1-D	1,1-D	1,2,3-	1,2-D	1,2-D	1,2-D	1,2-D	1,2-tr	1,3-D	1,3-ci	1,3-tr	1,4-D	2-Chi	2-Chl	4-Chl	Brom	Brom	Brom	Brom	Carbo	Chlor	Chlor	Chlo	Dibre	Dibro	Meth	Meth	Meth	Tetra	Trich	Viny	

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

.W4	QUAL	æ		В			В		ם			Þ	ם			ם	n	ח	ב	ח	ם	ב	ב	ם	ם	ב	n	n	ם	n	D	ם	n	D	D	
MW8 PC-LF6-MW8-GW4 09/08/93	RESULT Q	***	0.26	0.27	1.70	•	0.27	1.70	0.35	0.17	4.70	5	0.25	0.24		s	5	70	s	s	5	20	5	\$	٠	Š	20	ς.	5	70	S	5	70	S	ν,	
GW4	QUAL	Ω	ם	ם		Þ	Þ		Þ	Ω	Ω	Þ	Þ	D		ם	Þ	ם	n	ם	D	ם	D	ם	D	כ	ב	D	ם	ם	Ω	D	D	n	ם	
MW6 PC-LF6-MW6-GW4 09/12/93	RESULT	0.15	0.20	0.20	1	0.50	0.15	•	0.35	0.25	0.20	5	0.25	0.25		s.	\$	20	S	νς	s	20	\$	5	ν	S	20	5	s	20	35	5	70	s	\$	
GW4	QUAL	Ø	Б	5		5	5		5	5	-	n	n	'n		ח	n	n	n	n	n	Ω	ם	ח	Ω	Þ	D	>	Ω	Þ	n	n	D	Ω	Þ	
MW5 PC-LF6-MW5-GW4 09/12/93	RESULT	0.15	0.20	0.20	•	0.50	0.15	•	0.35	0.25	0.74	3	0.25	0.25		\$	5	20	s	5	5	20	5	5	5	S	20	2	s	70	s.	S	20	s.	80	
3W4	QUAL	n	ם	ם		Ω	n		ב	n	n	D	Ω	D		Ω	n	Ω	ם	כ	ם	ח	n	n	D	Ω	ם	Ω	n	n	ם	Ω	n	Ω	ם	
MW4 PC-LF6-MW4-GW4 09/12/93	RESULT	0.15	0.20	0.20	•	0.50	0.15		0.35	0.25	0.20	5	0.25	0.25		S	<b>ν</b>	20	s.	ς.	\$	20	5	\$	\$	5	20	\$	5	20	5	5	20	5	\$	
GW4	QUAL	n	'n	Ω		D	Þ		ם	n	D	D	ם	ם		ם	ח	n	n	n	ם	ב	n	ם	ם	n	Ω	n	ם	Ω	ם	D	Ω	ם	D	
MW3 PC-LF6-MW3-GW4 08/26/93	RESULT	0.15	0.20	0.20	,	0.50	0.15	•	0.35	0.25	0.20	5	0.25	0.25		5	5	20	5	\$	S	20	s	\$	2	S	20	S	S	20	\$	S	20	S	S	
-GW4	QUAL	m	ם	n		n	n			D		Ω	D	В		ם	D	ר	D	ם	ם	n	Ω	ם	ם	n	ח	n	Ω	ם	ם	ם	ם	ם	ם	
MW2 PC-LF6-MW2-GW4 08/11/93	RESULT	0.58	0.20	0.20	•	0.50	0.15	٠	0.07	0.25	0.16	s	0.25	0.15		S	8	70	5	S	×	20	S	5	S	s	50	S	s	20	s	s	20	S	S	
LOCATOR: SAMPLE ID: TION DATE:	UNITS:	J/ <b>a</b> n	ug/l	J/gn	l/gu	l/gu	I/8n	l/gu	l/gn	l/gu	I/gu	l/gn	l/gn	ng/l	.44° .15	l/gu	l/än	ug/I	ng/l	l/gu	l/gn	l/gn	ug/I	l∕gu	l∕gu	√gn	l/gn	l/gu	ug/I	l/gu	ng/l	/8n	ng/I	ug/l	1/8π	
LOCATOR: SAMPLE ID: COLLECTION DATE:	ם					ene										<u>.</u>	ropane)	•									henol					, i		l ether	enol	
		8020 1.2-Dichlorobenzene	1.2-Dimethylbenzene	1,3-Dichlorobenzene	1,3-Dimethylbenzene	1,3/1,4-Dimethylbenzene	1,4-Dichlorobenzene	1,4-Dimethylbenzene	Benzene	Chlorobenzene	Ethylbenzene	Methyl-t-Butyl Ether	Styrene	Toluene	LCBNA	1.2.4-Trichlorobenzene	2.2'-Oxybis(1-Chloropropane)	2.4.5-Trichlorophenol	2,4.6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methyl-4,6-Dinitrophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	4-Bromophenyl phenyl ether	4-Chloro-3-methyl phenol	

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

	!					,							
LOCATOR: SAMPLE ID: COLLECTION DATE:	LOCATOR: SAMPLE ID: TION DATE:	MW2 PC-LF6-MW2-GW4 08/11/93	72-GW4 33	MW3 PC-LF6-MW3-GW4 08/26/93	3-GW4	MW4 PC-LF6-MW4-GW4 09/12/93	74-GW4 93	MW5 PC-LF6-MW5-GW4 09/12/93	5-GW4	MW6 PC-LF6-MW6-GW4 09/12/93	6-GW4	MW8 PC-LF6-MW8-GW4 09/08/93	'8-GW4 33
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloroaniline	V8n	5	D	S	ם	, v	D	\$	D	ν,	D	δ.	D
4-Chlorophenyl phenyl ether	l/gn	5	Ω	S	Ω	S	n	S	D	S	D	S	Ω
4-Methylphenol	l/gn	\$	n	5	Ω	S	n	ĸ	Ω	\$	Ω	ĸ	D
4-Nitroaniline	l/gu	20	ם	20	Ω	20	n	20	ם	20	D	20	n
4-Nitrophenol	l/gu∵	20	Ω	20	D	20	Ω	20	Ω	20	D	20	ם
Acenaphthene	l/gn	S	n	\$	D	5	D	S	Ω	S	Ω	S	ם
Acenaphthylene	l/gn	\$	ם	5	n	s	Ω	8	Þ	S	Ω	S	Ω
Anthracene	ug/l	5	D	5	n	5	Ω	\$	ם	\$	Ω	s	D
Benzo(a)anthracene	ng/l	5	n	5	Ω	5	n	S	Þ	\$	n	ĸ	n
Benzo(a)pyrene	l/gn	\$	D	5	Ω	5	Ω	S	Þ	\$	Ω	S	ם
Benzo(b)fluoranthene	l/gn	5	D	5	ם	5	Ω	S	n	s.	D	S	n
Benzo(ghi)perylene	l/gn	\$	D	\$	D	5	n	3	Ω	Ś	Ω	S	ם
Benzo(k)fluoranthene	l/gu	5	D	S	Þ	5	Ω	S	n	S	D	νς.	D
Butyl benzyl phthalate	ug/l	S	ס	5	ח	5	Ω	\$	Ω	5	Ω	2	
Chrysene	l/gn	5	D	5	D	5	Ω	S	Ω	\$	Ω	S	D
Di-n-butyl phthalate	l/gu	5	D	0.80	B (	\$	Ω	S	Ω	\$	Ω		-
Di-n-octyl phthalate	√gn	S	D	5	Ω	5	n	S	D	S	ם	8	D
Dibenzo(a,h)anthracene	l/gu	\$	D	5	Ω	\$	Ω	5	Ω	<b>'</b>	D	\$	D
Dibenzofuran	ug/l	\$	Ω	5	D	\$	Ω	5	Ω	5	D	5	D
Diethyl phthalate	/gn	5	Ω	0.70	9	2		2		09.0		0.00	0
Dimethyl phthalate	l/gu	\$	Ω	5	n	5	ם	5	Ω	S	D	\$	D
Fluoranthene	l/gu	5	Ω	5	Ω	5	Ω	S	Ω	ν,	n	5	כ
Fluorene	l/gn	5	Ω	5	Ω	S	ח	\$	Ω	<b>S</b> C	D	\$	D
Hexachlorobenzene	ug/]	5	D	5	n	5	D	5	Ω	5	ח	s.	Ω
Hexachlorobutadiene	ug/1	S	D	3	ם	5	Þ	5	D		D	5	D
Hexachlorocyclopentadiene	l/gn	S	n	\$	Ω	5	D	5	Þ	2	D	5	n
Hexachloroethane	l/gu	5	n	\$	n	\$	D	<b>S</b>	Ω	S	D	S	Ω
Indeno(1,2,3-c,d)pyrene	ug/l	\$	Ω	\$	ם	\$	Þ	\$	D	S	D	S	Ω
Isophorone	l/gu	5	n	\$	ח	5	D	S	D	5	n	S	n
N-Nitrosodi-N-Propylamine	l/gu	5	ם	\$	ח	5	D	\$	D	S	D	S	D
N-Nitrosodiphenylamine	l/gu	5	n	5	ם	S	D	5	D	S	ח	S	D
Naphthalene	ng/I	5	D	5	ם	5	D	S	Þ	\$	Ω	S	n
Nitrobenzene	l/gn	\$	ם	\$	n	5	Ω	\$	n	<b>S</b>	n	5	Ω
Pentachlorophenol	l/gu	20	D	20	D	20	D	20	ם	20	ם	20	D
Phenanthrene	ng/l	ν	ם	5	D	5	Ω	νς	n	5	Ω	δ.	D
Phenol	∏gn	<b>ν</b>	ם	3	B	9		s.	n	S	n	2	

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

Pyteme (spinor)         Pyteme (sp	LOCATOR: SAMPLE ID: COLLECTION DATE:	MW2 PC-LF6-MW2-GW4 08/11/93	GW4	MW3 PC-LF6-MW3-GW4 08/26/93	3-GW4 33	MW4 PC-LF6-MW4-GW4 09/12/93	t 74-GW4 93	MW5 PC-LF6-MW5-GW4 09/12/93	5-GW4	MW6 PC-LF6-MW6-GW4 09/12/93	6-GW4 3	MW8 PC-LF6-MW8-GW4 09/08/93	8-GW4
ugyl         5         U	UNITS:		JAU	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
me         upf         5         U         5	- 0	v	=	•	11	ν,	n	s.	n	×	D	S	Ω
ug/l         5         U         35         U         35         U         35         U         4         B         9         B         4         B         9         B         9         B         4         B         9         9         B         4         B         9         9         B         4         B         3         U         35		v	=	v	Þ	ν.	D	\$	Ω	ν,	n	S	D
ught         2         B         5         B         4         B         9         B         4         B         8         B         4         B         8         B         4         B         8         B         4         B         8         B         4         B         8         B         4         B         8         B         4         B         8         B         4         B         35         U		s vr	) <b>=</b>	, vo	Þ	ν.	D	S	Ω	\$	D	8	Ω
ug/l         48.40         0.B         35         U         4         U		. 6	) Д	יאי	Δ.	4	M	6	B	4	Ø	∞	<b>m</b>
ught         35         U         134         U         4		48 40	đ	35	=	30.7	0	35	ם	35.20	_	35	Ω
ug/l         4         0         4         0         4         0         4         0         13.40           ug/l         4         0         1         0         1         0         1         0         1         0         1         0         1         0         1         0         1         0         1         0         1         0         1         0         1         0         1         0         1         0         1         0         1         0         1         0         1         0 <th< td=""><td>7/80 :</td><td>35</td><td>9 =</td><td>35</td><td><b>:</b></td><td>3.5</td><td></td><td>35</td><td>'n</td><td>35</td><td></td><td>35</td><td>n</td></th<>	7/80 :	35	9 =	35	<b>:</b>	3.5		35	'n	35		35	n
ught         4         0         4         0         4         0         4         0         4         0         4         0         4         0         4         0         4         0         4         0         4         0         4         0         4         0         4         0         4         0         4         0         4         0         4         0         1         0         0         0         0         0         0         0         0         0	Tagn	Ç V	<b>=</b>	<u> </u>	=	4	o n	4	ם	4	D	13.4	
ught         1         U	1/8n		) <b>:</b>	4	=	. 4		4	n	4	D	4	ב
ug/l         1         U	r/gn	<b>,</b> -	<b>=</b>	٠ -	=		=	_	ב		D	2.4	_
ug/l         3         U         4         U         4         U         4         U         4         U         4         U         4         U         4         U         4         U         4         U         4         U         4         U         4         U	l/gn √-∵		=	-	=		=	-	Þ	-	D	-	
ug/1         3         U         3         U         3         U         3         U         3         U         3         U         3         U         3         U         3         U         3         U         3         U         3         U         3         U         3         U         550         U         75.90         U         7	ug/I	- ~	=	- (*)	ם מ	ייי	ם ב	m	Þ	က	D	5.4	0
ug/l         8         U         8         U         8         U         8         U         75.90           ug/l         8         U         8         U         8         U         8         U         8         U         75.90           ug/l         4         U         4.20         0B         8.20         0B         5.20         0B         53.30           ug/l         2         U         2.0         U         4         U         4         U         4         U         4         U         8         U         8         U         8         U         8         U         8         U         8         U         8         U         8         U         8         U         8         U         8         U         8         U         8         U         8         U         9         U         9         0         0         D         U         4         U         4         U         4         U         2         UL	ug/1 1/απ	, «	=	. 65	· =	·m	Ω	ю	ם	m	D	3	
ug/l         8         U         8         U         8         U         8         U         8         U         8         U         8         U         8         U         8         U         8         U         8         U         9         W         9         W         9         W         9         W         9         W         8         U         8         U         8         U         8         U         8         U         8         U         8         U         8         U         8         U         8         U         8         U         8         U         8         U         4         U         4         U         4         U         4         U         4         U         4         U         3         U         3         U         3         U         3         U         3         U         3         U         3         U         3         U         3         U         3         U         3         U         3         U         3         U         3         U         4         U         4         U         4         U         4         U		, <b>«</b>	) D	, 00	D	∞	Ω	<b>∞</b>	D	œ	n	75.9	0
ug/l         4         U         4.20         OB         8.20         OB         4.90         OB         5.20         OB         53.30           ug/l         4         U         4         U         4         U         4         U         8.20         OB           ug/l         2         U         2         U         2         U         2         UL         2 <t< td=""><td>/9n //8n</td><td>, oc</td><td>=</td><td>•</td><td>D</td><td>∞</td><td>ב</td><td>∞</td><td>n</td><td><b>∞</b></td><td>n</td><td><b>∞</b></td><td></td></t<>	/9n //8n	, oc	=	•	D	∞	ב	∞	n	<b>∞</b>	n	<b>∞</b>	
ug/l         4         U         4         U         4         U         4         U         8.20           ug/l         2         U         2         U         2         U         2         U         38.20           ug/l         0.20         U         2.10         U         2         U         2         UL         3         U         38.20           ug/l         0.20         U         <	/en	<b>4</b>	ם ס	4.2		8.2		4.90		5.2		53.3	
ug/l         2         U         2         UL         38.20           ug/l         2         U         2         UL         2         UL         38.20           ug/l         2         U         2         UL         3         U         4         U         43.10         U         43.10         U         4         U         4         U         4         U         4         U         4         U         4         U         4         U         4         U         4         U         4	I/an	4	ח	4		4	ח	4	Ω	4	ם	8.2	
ug/l         2         UL         0.20         U         0	l/gu	7	D	2.1		2	Ω	2	Ω	7	ij	38.2	
ug/I         0.20         U	l/gu	2	D	2	UL	2		2		7	_	2	
ug/l         0.20         U         0.20         0.20         U         0.20         U         0.20         U         0.20         U         0.20         U         0.20         U         0.20	l/gu	0.20	ם	0.2		0.2		0.20		0.2		0.2	
ug/l         18         U         17         10         13         U         17         10	l/gu	0.20	n	0.2		0.2		0.20		0.2		0.2	
ug/l         18         U         17         10         13         U         17         10         13         U         13         U         4         U <th< td=""><td>l/gu</td><td>18</td><td>ם</td><td><u>~</u></td><td>n</td><td></td><td><b>&gt;</b></td><td><u>s</u> :</td><td>o :</td><td><u>~</u> :</td><td><b>-</b> :</td><td>1.04</td><td></td></th<>	l/gu	18	ם	<u>~</u>	n		<b>&gt;</b>	<u>s</u> :	o :	<u>~</u> :	<b>-</b> :	1.04	
ug/l     3     UL     3     U     3     U     3     U     3     U     3     U     3     U     3     U     4     U	l/gn	81	ם	18	: כ	8 '	o :	æ '	<b>&gt;</b> :	- 1 <u>-</u>	<b>-</b>	1.67	
ug/l         3         U         3         U         3         U         3         U         3         U         4         U         8         8         0         9         38.20         B         4         U         4         U         4         U         4         U         4         U         4         U         4         U         4         U         4         U         4         U<	l/gu	m	J D	m	0	<b>.</b>	<b>)</b>	n (	<b>&gt;</b> :	ο (	<b>:</b>	: ,	
ug/l     4     U     3     U     3	l/gu	က	ב	က	Tn	9	כ	. 0.	<b>)</b>	η.	<b>;</b>	n •	) :
ug/l         4         U         4         U         4         U         4         U         4         U         4         U         4         U         4         U         4         U         4         U         4         U         4         U         4         U         3         U         4         U         4         0         8         8         0         9         9         3         2         0         9         9         0         9           mg/l4U4U	l/gu	4	n	4	Ω	4	ם	4	>	4	<b>&gt;</b>	4	<b>&gt;</b> :
ug/l         3         UL         3         UL         3         U         4         I         I         4         I         I         4         I         I         4 <td>l/an</td> <td>4</td> <td>ם</td> <td>4</td> <td>n</td> <td>4</td> <td>D</td> <td>4</td> <td>D</td> <td>4</td> <td>Þ</td> <td>4</td> <td>ָר ר</td>	l/an	4	ם	4	n	4	D	4	D	4	Þ	4	ָר ר
ug/l         3         UL         3         3         3         UL         3	l/an	8	ΩΓ	9	UL	æ	D	9	ם	m	Þ	9	To of
ug/I         6.90         0B         4.30         0B         20.40         B         11.60         0B         67.70         B         167           ug/I         4         U         4         U         8.80         0B         10         0B         38.20         B         4           mg/I         0.50         B         0.50         B         0.50         B         0.050         B         0.060	l/an	m	ΩΓ	3	Tn	3	'n	3	'n	က		3	J D
ug/l 4 U 4 U 8.80 OB 10 OB 38.20 B 4   1 mg/l 0.50 B 0.50 B 0.50 B 0.00 B 0.00	Von	6.90		4.3		20.		11.6		67.7		167	
mg/1 0.50 B 0.50 B 0.25 U 2.30 B 0.60	l/an	4		4		8		10	<b>B</b> ()	38.2		4	n
mg/1 0.50 B 0.50 B 0.50 B 0.25 U 2.30 B 0.60													
		0.50		0.5		0		0.2		2.3		0.0	

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

MW3 PC-HN8-MW3-GW4 PC-HN8-MW4-GW4 09/12/93 09/12/93	RESULT QUAL RESULT QUAL	;	Ω	0.35 U 0.35	0.40 U 0.40	0.25 U 0.25	0.35 U 0.35	0.35 U 0.35	0.35 U 0.35	0.35 U 0.35	0.30 U 0.30	0.25 U 0.25	Ω	Ω	Ω	Ω	0.25 U 0.25	0.20 U 0.20	Ω	0.25 U 0.25	0.35 U 0.35	Ω	0.25 U 0.25	0.40 U 0.40	n	Ω	0.35 U 0.35	0.50 U 0.50	0.35 U 0.33	ם	0.40 U 0.40	0.45 U 0.45	0.50 U 0.50	0.50 B 0.83	1.20 J 0.30	0.00
MW2 PC-HN8-MW2-GW4 09/12/93	RESULT QUAL			0.35 UJ	0.40 U	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	0.30 U	0.25 U	0.30 U	0.30 U	0.20 U	0.30 U	0.25 U	0.20 U	0.40 U	0.25 U	0.35 U	0.85 UJ	0.25 U	0.40 U	0.50 U	0.35 U	0.35 U	0.50 U	0.35 UJ	0.30 U	0.40 U	0.45 U	0.50 U	0.83 B	0.30 U	11 05 0
MW1 PC-HN8-MW1-GW4 08/15/93	RESULT QUAL				0.40 U	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	0.30 U	0.25 U	0.30 U	0.30 U	0.20 U	0.30 U	0.25 U	0.20 U	0.40 U	0.25 U	0.35 U	0.85 U	0.25 U	0.40 U		0.35 U	0.35 U	0.50 U	0.35 U	0.30 U	0.40 U	0.45 U	0.50 U	0.11 B	0.30 U	0.30
MW10 PC-LF6-MW10-GW4 09/16/93	RESULT QUAL		0.35 U	0.30	0.40 U	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	0.30 U		0.30 U	0.30 U	0.20 U	0.30 U	0.25 U	0.20 U	0.40 U	0.25 U	0.35 U	0.85 U	0.25 U	0.40 U	0.50 U	0.35 U	0.35 U	0.50 U	0.35 U	0.30 U	0.40 U	0.45 U	0.50 U	0.10 B	0.30 U	0.30
MW9 PC-LF6-MW9-GW4 09/08/93	RESULT QUAL	;			0.40 U	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	0.30 U	0.25 U	0.30 U	0.30 U	0.20 U	0.30 U	0.25 U	0.20 U	0.40 U	0.25 U	0.35 U	0.85 U	0.25 U	0.40 U	0.50 U	0.35 U	0.35 U	0.50 U	0.35 U	0.30 U	0.40 U	0.45 U	0.50 U	89.0	0.30 U	11 030
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:		9		ıane	1,1,2-Trichloroethane ug/l	,1-Dichloroethane ug/l	1,1-Dichloroethylene ug/1	1,2,3-Trichloropropane ug/l		1,2-Dichlorobenzene ug/l	1,2-Dichloroethane ug/l	,2-Dichloropropane ug/l	ylene		,3-cis-Dichloropropylene ug/l	,3-trans-Dichloropropylene ug/l	,4-Dichlorobenzene ug/l	2-Chloroethylvinyl ether ug/l	2-Chlorotoluene ug/l	4-Chlorotoluene ug/l	Bromobenzene ug/l	Bromochloromethane ug/l	Bromodichloromethane ug/l		Carbon Tetrachloride ug/l	Chlorobenzene ug/l	Chloroethane ug/l	Chloroform ug/1	Dibromochloromethane ug/l	Dibromomethane ug/l		Methyl chloride ug/I			Trichloroethylene no/l

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

'4 W4-GW4 /93	QUAL	U 21	0.20 U	0.20 U		0.50 U	'n			0.00		)		07	1	<b>:</b>	<b>)</b> ;			<b>)</b> ;	<b>)</b> :	<b>)</b> :													
MW4 PC-HN8-MW4-GW4 09/12/93	RESULT	Ó	0	0	•	0.	<b>.</b>	, 6	<i>.</i>	o c	7.		o o	Ď.	•	O ,	n (	2, 4	o ,	<b>α</b> '	n (	22	n 4	n 4	, v	. c	3 4					ר כנ			
3-GW4	QUAL	Ω		D		: כ			<b>:</b>				<b>&gt;</b> ;		:	<b>&gt;</b> ;	⊃ ;	<b>)</b> ;	o ;	o :	<b>&gt;</b>	<b>&gt;</b> ;	<b>&gt;</b> ;	<b>&gt;</b> :	<b>:</b>	) <b>:</b>	)	<b>)</b>	<b>-</b> :	<b>&gt;</b> :	: כ	<b>&gt;</b>	⊃ <b>=</b>	<b>-</b>	)
MW3 PC-HN8-MW3-GW4 09/12/93	RESULT	0.15	0.20	0.20	•	0.50	0.15	36.0	0.33	0.00	07:0	200	0.20	0.23	•	<b>^</b> '	^ :	. 20	'n	so i	<b>S</b>	, 20 , 20	n 1	<b>ν</b> •	n 4	n (	97 *	י מ	n g	3,	n <b>'</b>	v 5	3 4	n 4	•
GW4	QUAL	=	ם	D		ם	æ	:	<b>)</b> :	>	:	o :	0 1	m	:	<b>)</b>	<b>&gt;</b> 1	<b>)</b>	: כ	ם י	⊃	<b>)</b>	<b>)</b>	o:	<b>&gt;</b> :	<b>)</b>	<b>&gt;</b>	<b>:</b>	<b>&gt;</b> :	<b>&gt;</b> :	Þ :	) :	<b>&gt;</b>	<b>-</b>	2
MW2 PC-HN8-MW2-GW4 09/12/93	RESULT	0.15	0.20	0.20	•	0.50	0.25	1 0	0.35	C7:0	11.0	200	0.25	0.24	•	eo '	\$	70	<b>v</b> o :	ν.	2	20	<b>.</b>	vn v	n 4	n 8	97	o v	n (	20	'n	s &	07	Λ ·	ņ
GW4	QUAL	Ξ	=	<u> </u>		n	D	:	<b>)</b> :	<b>&gt;</b> :	<b>)</b>	<b>&gt;</b> ;	<b>-</b>		;	0	ם	ח	ח	)	ר	ם	<b>&gt;</b>	<b>)</b> ;	<b>&gt;</b> :	o ;	<b>&gt;</b> :	<b>)</b> ;	<b>&gt;</b> :	D :	<b>&gt;</b> :	<b>)</b>	: כ	<b>)</b> :	2
MW1 PC-HN8-MW1-GW4 08/15/93	RESULT	91.0	0.00	0.53	ı	0.50	0.15	, (	0.35	0.25	0.20	\$	0.25	0.24	1	ν	ν.	20	\$	\$	v)	70	2	S.	vo v	٠ <del>(</del>	20	S.	s ¦	50	. S	s ;	<sub>20</sub>	'n,	n
-GW4	QUAL	E	) <b>=</b>	Þ		Ω	D	1	ם :	: כ	<b>-</b>	Þ	כ	Þ		כ	ח	ם	ם	Ω	n	D	ר	ם	<b>&gt;</b> :	<b>)</b>	<b>)</b>	<b>D</b>	D	כ	ב כ	י כ	<b>:</b>	e :	<b>&gt;</b>
MW10 PC-LF6-MW10-GW4 09/16/93	RESULT		0.10	0.50	ı	0.50	0.15		0.35	0.25	0.20	2	0.25	0.25		s.	5	70	\$	5	5	20	\$	5	<b>.</b>	\$	20	<b>S</b>	\$	20	\$	<b>S</b>	, 20	<b>S</b>	n
GW4	QUAL	ŕ	۵ =	<b>—</b>		Ω	8		)	<b>&gt;</b>	)	ם	Þ	D		ח	n	D	n	D	n	D	Ω	D	י ב	<b>&gt;</b>	<b>&gt;</b> :	Ω	ב	D	ם	<b>&gt;</b>	י ב	ם	<b>&gt;</b>
MW9 PC-LF6-MW9-G 09/08/93	RESULT	Č	0.20	0.19		0.50	0.21		0.35	0.25	0.20	S	0.25	0.25		S	\$	70	S	5	S	20	5	5	<b>.</b>	ν,	20	\$	5	20	5	S	20	S	S
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:			3-Dichlorobenzene		Sene		,4-Dimethylbenzene ug/l		Chlorobenzene ug/l	Ethylbenzene ug/l	Methyl-t-Butyl Ether ug/l	ng/l	ene ug/1	NA.	1,2,4-Trichlorobenzene ug/l	2.2'-Oxybis(1-Chloropropane) ug/l	2,4,5-Trichlorophenol ug/l	2,4,6-Trichlorophenol ug/l			,	2,4-Dinitrotoluene ug/l		2-Chloronaphthalene ug/l		phenol	2-Methylnaphthalene ug/l	2-Methylphenol ug/l	2-Nitroaniline ug/l		enzidine		4-Bromophenyl phenyl ether ug/l	4-Chloro-3-methyl phenol ug/l
		8020	1,2-D	1.4.1 1.4.1	1.3.5	1.3/1	4,1	1,4D	Benzene	Chlor	Ethyl	Meth	Styrene	Toluene	LCBNA	1,2,4	2.2	2,4,5	2,4,6	2.4-L	2.4-L	2,4-L	2,4-I	2,6-I	2-Ch	2-Ch	2-Me	2-Mc	2-Me	2-Ni	2-Z	3,3	3-N	4-Br	<b>4</b>

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

LOCATOR: MW9 MV SAMPLE ID: PC-LF6-MW9-GW4 PC-LF6-M COLLECTION DATE: 09/08/93	UNITS: RESULT QUAL RESULT	S U S S	ug/l 5 U 5	ugn 5 U s	20 U	20 U	ug/l 5 U S	ug/l S U	ug/l S U	5	S	ug/l S ngu	s.	0 S 1/8n	.,	ug/l S Ugu	ug/l l J	S U	5 U	S U	است	D :	O :	o:	o;	0 1	)	<b>&gt; =</b>		) <b>:</b>	) =	) <del>-</del>	) <del>-</del>	î 00°	2 2 2	ug/l 3	
MW10 PC-LF6-MW10-GW4 1 09/16/93	r QUAL	0 S	0 S	S U	0	n c	s u	5 U	S U	S U	S U	s u	S U	5 O	s u	) N S	s 0	S U	s 0							)										s u	
MW1 PC-HN8-MW1-GW4 08/15/93	RESULT QUAL	s U	5 U	5 U	20 U	20 U	5 U	5 U	S U	5 U	5 U	5 U	5 U	5 U	S U	5 U	5 U	5 U	5 U	S U	. S	- ·	) S	o :	o :	o :			, ,	o =		, <b>,</b>	) <b>-</b>			n s	
MW2 PC-HN8-MW2-GW4 09/12/93	RESULT QUAL	S U	5 U	5 U	20 U	20 U	S U	S U	5 U	5 U	5 U	5 U	S U	S U	2 0	S U	s 0	s O	5 U	S U	2 ·	o :	٠,	S .	) : )	O #					. •	. •				o s	
MW3 PC-HN8-MW3-GW4 09/12/93	RESULT QUAL	v	ς.	S	70	20	2	<b>S</b>	. 2	S		\$	ς.	<b>'</b>	<b>S</b>	<b>.</b>								. ·	n •	n •	, <b>.</b>	, <b>v</b>	· •	· •	, <b>v</b>	· •	· •	, 0¢		3 5	
MW4 4 PC-HN8-MW4-GW4 09/12/93	RESULT	U S	U S	U S	U 20	U 20	U 5	U 5	U S	U S	U 5	u s	. S	. S	S .	. S	U S			U S		. s		s :	· ·	, w		· •			· •		. ~	,		U S	
Ř	QUAL	D	n	ם	ח	Ω	n	n	D	ם	Þ	D	<b>&gt;</b>	<b>)</b>	<b>-</b>	>	D	D	D	n	:	<b>-</b> :	<b>)</b> ;	o:	· :	<b>&gt;</b> =	<b>=</b>	) <b>=</b>	=	=	=	=	=	=	ם ח	Ω	

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

MW3 PC-RT9-MW3-GW4 08/27/93	RESULT QUAL		0.35 U	0.07 B	0.40 U	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	0.30 U	0.25 U	0.30 U	0.30 U	0.20 U	0.30 U	0.25 U	0.20 U	0.40 U	0.25 U	0.35 U	0.85 U	0.25 U	0.40 U	0.50 U	0.35 U		0.50 U	_	-		0.45 U		0.23 B	0.30 U	0.30 U	
	QUAL		ם	D	n	D	n	Ω	n	Ω	D	ם	Þ	n	Ď		n	ם -			D	D	D	n (	n (			n (		n c			D C		ם		
MW2 PC-RT9-MW2-GW4 08/27/93	RESULT		0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.16	0.30	0.40	0.45	0.50	0.53	0.30	0.30	
3W4	QUAL		Þ	Þ	ם	D	ם	ם	Ω	D	ם	Þ	n	D	D	D	n	ב	ם	ם	D	D	ם	D	D	D	n	D	D	ם	n	כ	Þ	B	-	-	
MW1 PC-RT9-MW1-GW4 08/27/93	RESULT Q		0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0:30	0.25	0:30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.35	0.30	0.40	0.45	0.50	0.26	-	09.0	
GW4	QUAL		Þ	ם	ם	n	n	ם	ם	n	n	n	n	D	ם	n	Þ	ם	Ω	ם	ם	Ω	n	ח	n	ב	Þ	ח	n	Þ	ם	Þ	כ	8	ם	Þ	
MW2 PC-FF7-MW2-GW4 09/14/93	RESULT		0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.35	0.30	0.40	0.45	0.50	0.16	0.30	0.30	
GW4	QUAL		n	n	ם	ם	n	D	ם	ם	D	ם	D	D	ח	ח	Ω	n	n	Ω	n	D	Ω	n	ם	Ω	ם	ם	n	D	ם	ם	D	æ	ם	ב	
MW5 PC-HN8-MW5-GW4 09/14/93	RESULT		0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.35	0.30	0.40	0.45	0.50	0.21	0.30	0.30	
GW4	UAL		D	D	ם	Ω	D	D	Ω	n	ח	n	n	ם	ם	D	D	n	n	ם	0	n	D	D	n	D	n	ם	ב	ם	ם	ם	D	<b>B</b>	ב	ם	
MW9 PC-HN8-MW9-GW4 09/12/93	RESULT Q		0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.35	0.30	0.40	0.45	0.50	99.0	0.30	0.30	
	UNITS:		l/gn	ug/l	ng/I	/ăn	/an	l/gn	ug/l	ug/1	l/gn	l/gn	ng/l	ng/l	l/gn	ug/I	l/gn	l/gn	l/gn	l/gn	l/gn	ug/I	ng/I	ug/l	l/gn	ng/l	ng/l	l/gn	ng/l	ug/l	l/gn	l/gu	//gn	l/8n	ng/l	l/gn	
LOCATOR: SAMPLE ID: CTION DATE:	Þ													:																				ngins Port Jacobs			
LOCATOR: SAMPLE ID: COLLECTION DATE:		8010	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethylene	1,2,3-Trichloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,2-trans-Dichloroethylene	1,3-Dichlorobenzene	1,3-cis-Dichloropropylene	1,3-trans-Dichloropropylene	1,4-Dichlorobenzene	2-Chloroethylvinyl ether	2-Chlorotoluene	4-Chlorotoluene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Dibromochloromethane	Dibromomethane	Methyl bromide	Methyl chloride	Methylene chloride	Tetrachloroethylene	Trichloroethylene	

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

LOCATOR: SAMPLE ID: COLLECTION DATE: UNITS:	LOCATOR: SAMPLE ID: TION DATE: UNITS:	MW9 PC-HN8-MW9-GW4 09/12/93 RESULT QUAL	-GW4	MW5 PC-HN8-MW5-GW4 09/14/93 RESULT QUAI	-GW4	MW2 PC-FF7-MW2-GW4 09/14/93 RESULT QUAL	MV PC-RT9-M 08/2' RESULT	MW1 PC-RT9-MW1-GW4 08/27/93 RESULT QUAL	,	28 % 8 % %	LGW4 3 QUAL	MW3 PC-RT9-MW3-GW4 08/27/93 RESULT QUAI	-GW4
8020 1,2-Dichlorobenzene 1,2-Dichloropenzene	l/gn	2.20	=	0.14	<b>a</b> =	0.15 U 0.20 U		0.15 U 0.20 U	<b>.</b>	0.15	ממ	0.15	ממ
,3-Dichlorobenzene	ng,	0.20	כס	0.20	ם			0.20 U	. 5	0.20	n	0.20	n
,3-Dimethylbenzene ,3/1,4-Dimethylbenzene	l/gu ug∕l	0.50	Ω	0.50	D	0.50 U		o.so u	5	0.50	Ω	0.50	
,4-Dichlorobenzene	l/gn	0.15	Ω	0.15	D	0.15 U		0.15 U		0.15	n	0.15	D
1,4-Dimemyloenzene Benzene	ug/1 ug/1	0.35	ח	0.35	D	0.0		0.35	_	0.35	U	0.35	
Chlorobenzene	ug/l	0.25	ם	0.25	Ω	0.25 U		0.25	ם	0.25	D:	0.25	
Ethylbenzene	l∕gu	0.20	<b>&gt;</b> :	0.12	:	0.20 U			ם ם	0.20	o =	0.20	o =
Methyl-t-Butyl Ether	l/gu l/zu	5 0.25	<b>&gt;</b> =	3 0 25	> =				o 🗅	0.25	) <b>&gt;</b>	0.25	
	ug/1	0.15	, <b>m</b>	0.17	, ш			0.25	. 5	0.25	D	0.25	
1,2,4-Trichlorobenzene	l/gn	\$	ב	5	n	s U		5	J	s.	ם	S	Ω
2,2'-Oxybis(1-Chloropropane)	ug/l	5	D	5	n	S U		5	•	<b>~</b> ;	o:	s ;	<b>:</b>
2,4,5-Trichlorophenol	l/gn	70	D	20	ם	20 U	7	0	_	, 20	<b>&gt;</b> :	70	) :
2,4,6-Trichlorophenol	ng/l	s,	<b>D</b> ;	, s	<b>&gt;</b> :	S .		· ·	<b>-</b> -	vo 4	<b>)</b> :	o v	o :
2,4-Dichlorophenol	l/gu		o :	n 4	<b>:</b>	O :			<b>&gt;</b> =	א מ	<b>&gt;</b> =	n v	> <b>=</b>
2,4-Dimethylphenol	ug/I	v 6	<b>&gt;</b> =	v 6	<b>&gt;</b> =	20 00	•		o D	, 2 20	<b>&gt;</b> >	20	כס
2.4-Dimitropolitions	ug/l		=	ļ v	ם כ	0 0			D	S	n	S	D
2.6-Dinitrotoluene	ug/l		o O	, <b>v</b> o	ם	S U			D	5	Ω	5	Ω
2-Chloronaphthalene	l/gn	5	Ω	5	ח				D	2	D	S.	Þ
2-Chlorophenol	l/gn	5	ם	5	Ω				ם	~	<b>&gt;</b>	S ;	<b>&gt;</b>
2-Methyl-4,6-Dinitrophenol	l/gn	50	ב	20	n	20 U	•		D	20	Þ	20	D
2-Methylnaphthalene	l/gn	S	ח	S	ח				ם	<b>.</b>	<b>&gt;</b> :	S 1	<b>D</b> :
2-Methylphenol	l/gn	\$	D	5	n				ם	2	<b>D</b>	s ;	<b>)</b>
2-Nitroaniline	l/gu	20	n	70	D	20 U			5	20	Þ	70	<b>)</b>
2-Nitrophenol	l/8n	\$	n	5	D				<b>D</b>	<b>S</b>	<b>D</b> 1	so i	<b>&gt;</b>
3,3'-Dichlorobenzidine	l/gu		D	s	D				Þ	vo.	Þ	<b>S</b>	<b>&gt;</b>
3-Nitroaniline	ug/1	7	ם	20	ם	20 U			<b>5</b>	20	Þ	, 20	<b>&gt;</b> :
4-Bromophenyl phenyl ether	I/gu	\$	ם	\$	n				<b>o</b> :	'n	<b>&gt;</b> :	<b>α</b> '	<b>)</b> :
4-Chloro-3-methyl phenol	l/gu	S	D	ς.	2				5	ν,	Þ	c	•

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

GW4	QUAL	n	Ω	Ω	n	n	D	D	D	D	Þ	D	Ω	Þ	n	n	n	Ω	n	Ω	Ω	n	n	n	ņ	n	n	Ω	Ω	ם	D	D	D	Þ	D	Ω	D
MW3 PC-RT9-MW3-GW4 08/27/93	RESULT	٧n	\$	S	2	20	s	s	s.	S	\$	\$	5	\$	S	5	S	S	5	S	\$	s	v	S	\$	S	s	S	<b>~</b> S	S	s	s	\$	\$	20	\$	S
2-GW4	QUAL	D	n	Þ	Ω	Ω	D	ם	ב	n	D	Ω	n	D	Þ	D	Ω	Ω	Ω	n	n	Ω	Ω	ם	D	D	ם	n	Þ	D	Þ	ם	n	D	n	Þ	D
MW2 PC-RT9-MW2-GW4 08/27/93	RESULT	ς.	5	<b>S</b>	20	20	S	s	s	5	S	<b>S</b> C	sc.	s	S	S	S	S	5	\$	S	\$	<b>.</b> 5	5	\$	S	\$	\$	2	S	\$	\$	\$	\$	20	\$	<b>v</b>
I-GW4 3	QUAL	D	D	Ω	ם	D	n	D	n	Ω	n	D	n	D	Ω	Ω	Ω	D	ב	D	89	n	D	n	D	n	Ω	Ω	Ω	D	n	n	n	Þ	D	n	M
MW1 PC-RT9-MW1-GW4 08/27/93	RESULT	s.	\$	\$	20	20	\$	S	s	s	sc.	s	<b>S</b>	s	S	35	S	s	S	\$	0.60	S	5	S	\$	\$	\$	5	S	5	\$	s	\$	\$	70	5	2
2-GW4 3	QUAL	n	Ω	Ω	Ω	n	ם	ם	Ω	D	D	n	D	n	Ω	Ω	Ω	n	Ω	ב	O	Ω	ח	n	n	D	ר	ם	D	n	n	D	n	n	n	Ω	D
MW2 PC-FF7-MW2-GW4 09/14/93	RESULT	\$	5	\$	20	20	S	\$	S	S	S	S	s	s	\$	S	\$	\$	S	\$	S	\$	\$	5	5	\$	S	s	\$	\$	s	8	S	S	20	\$	S
5-GW4 3	QUAL	Þ	Ω	Ω	D	ם	ם	D	n	Þ	n	Ω	D	Ω	Ω	Ω	Ω	Ω	D	Ω	n	D	ם	Ω	n	Ω	D	Þ	ם	n	D	Ω	Ω	D	Ω	n	D
MW5 PC-HN8-MW5-GW4 09/14/93	RESULT	ς.	S	S	20	20	5	\$	5	5	5	5	5	5	5	S	\$	S	S	S	5	\$	S	S	S	5	S	5	\$	\$	\$	\$	5	S	20	5	S
9-GW4 13	QUAL	Ω	Ω	n	Ω	Ω	D	Þ	Ω	Ω	Ω	Ω	ם	n	n	ב	Ω	Ω	D	n	n	Ω	n	Ω	n	ם	Ω	n	Ω	Ω	D	Þ	n	n	n	n	Ω
MW9 PC-HN8-MW9-GW4 09/12/93	RESULT	8	ς.	S	20	20	5	\$	S	s	S	s	S	\$	٧c	S	S	\$	S	S	ĸ	S	5	\$	5	5	S	5	5	5	5	5	s	5	20	S	S
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	l/Xn		l/gu		I/gu	l/gn	ug/l	I/gn	l/gn	l∕gu	l/gn	ng/l	ug/l	l/gn	l/gn	l/gn	l/gn	ug/1	l/gn	l/gn	l∕gu	l/gn	l/gn	ng/l	l/gn	l/gn	l/gn	l/gn	l/gn	l/gn	l/gu	γgn	l/gu	1/gn	l/gn	I/gu
COLLECT		4-Chloroaniline	4-Chlorophenyl phenyl ether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(ghi)perylene	Benzo(k)fluoranthene	Butyl benzyl phthalate	Chrysene	Di-n-butyl phthalate	Di-n-octyl phthalate	Dibenzo(a,h)anthracene	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-c,d)pyrene	Isophorone	N-Nitrosodi-N-Propylamine	N-Nitrosodiphenylamine	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

W4	QUAL	n	Þ	ם	æ		ם	Þ		Þ	0 <b>B</b>	Þ	כ	Þ		ב		ב		'n	D	ם י	0	<b>-</b> :	OF.	1	Þ	Þ	ď	ΩΓ	Ø	Þ		æ	
MW3 PC-RT9-MW3-GW4 08/27/93		2	S	~	<b>S</b>		35	35	25.50	4	-	_	m	m	32.70	∞	62.60	4	55.10	7	0.20	0.20	38.20	<u>«</u>	7)	J,	4	4	e	60	77.80	4		09.0	
PC-RT	RESULT																																		
-GW4	QUAL	Þ	Þ	Þ	æ		<b>9</b>	ב		Þ	0 <b>B</b>			Ω		n		ם			D			D ;			ב	Þ	n	J 5		() <b>B</b>		Δ	
MW2 PC-RT9-MW2-GW4 08/27/93	RESULT	5	s	s	w.		35.30	35	30.90	4	-	-	3	3	42.70	•	56.80	4	09.89	2	0.20	0.20	41.70	<u>8</u>	<b>m</b>	nr nr	4	4	æ	33	103	10.60		0.80	
GW4	QUAL	ם	n	D	m		כ	P	0	D	Ω	ם	ח	ם	0	n		ב		ď	ם	ם	D	ב כ	D	m	ם	ם				08		æ	
MW1 PC-RT9-MW1-GW4 08/27/93	RESULT	\$	S	s	7		35	35	45.90	4	_		3	3	8.20	∞	61.70	4	64.60	2	0.20	0.20	8	18	m	D	4	4	3	en	32	4.40		0.40	
3W4	QUAL	Þ	n	ם	m		ם	D		ם	D	Ω	ם	ם		n		Þ		D		Ω		ם	() <b>B</b>	æ	ם	D	ΩΓ	5				æ	
MW2 PC-FF7-MW2-GW4 09/14/93	RESULT	s	5	S	7		45	35	17.40	4	4	-	S	æ	52.20	<b>∞</b>	04.99	4	58.50	7	0.23	0.20	74.70	18	m	~	4	4	e	e	156	27.80		09.0	
GW4	QUAL	ם	D	n	Ø		ם	ם		D	D	Ω	n	n		n		D		ב	D	ס		ם	'n	Ω	n	n	ηn	5		n		æ	
MW5 PC-HN8-MW5-GW4 09/14/93	RESULT Q	ν.	ν.	ς.	ю		45	35	13.30	4	4	-	5	æ	46.30	œ	55.60	4	44	7	0.20	0.20	61.30	18	m	6.20	4	4	e	8	137	4		0.40	
	QUAL	n	Ω	Ω	В		Ω	ח	n	Ω	ם	Ω	n	Ω	ח	Ω	Ω	Ω	Ω	ΩΓ	Ω	Ω	n	Ω	ΩΓ	ΩΓ	n	n	ΩΓ	'n	<b>B</b> 0	0 <b>B</b>		æ	
MW9 PC-HN8-MW9-GW4 09/12/93	RESULT	ν,	5	\$	∞		35	35	4	4	-	_	m	ო	œ	<b>&amp;</b>	4	4	7	2	0.20	0.20	81	18	m	Э	4	4	က	3	6.70	11.80		09.0	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	I/au			₽gu .		I/gn	ug/l	l/gu	L/gu	Lgu.	I/ẩn	ugu	l/gu	l/gu	l/gu	I/8n	l/gu	1/gn	l/gu	l/gu	l∕gu	l/gn	l/gu	l/gu	l/gu	l/gu	Ug/1	I/Zn	1/Zn	Lgu	Ngu .		ons mg/l	
COLLE		Pyrene	bis(2-Chloroethoxy)methane	his/2-Chloroethyl) ether	bis(2-Ethylhexyl)phthalate	METALS	Antimony	Antimony, Dissolved	Arsenic	Arsenic, Dissolved	Beryllium	Beryllium, Dissolved	Cadmium	Cadmium, Dissolved	Chromium	Chromium, Dissolved	Copper	Copper, Dissolved	Lead	Lead, Dissolved	Mercury	Mercury, Dissolved	Nickel	Nickel, Dissolved	Selenium	Selenium, Dissolved	Silver	Silver, Dissolved	Thallium	Thallium, Dissolved	Zinc	Zinc, Dissolved	D <b>Q</b>	1 FH Total Petroleum Hydrocarbons	

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

W4	QUAL		Þ	D	D	Ω	ם	n	D	D	n	D	Ω	D	Ω	n	Ω	n	Ω	n	Ω	n	ם	n	ם		n	ם		D	Þ	Þ	D	Þ	D	n	Ω	
PW3 PC-PW-PW3-GW4 08/10/93	RESULT		0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0:30	0.30	0.20	0:30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	1.20	0.35	0.50	0.28	0.30	0.40	0.45	0.50	0.16	0.30	0.30	0.55	
3W4	QUAL		Þ	ם	Ω	n	ם	n	Ω	Þ	D	D	D	n	n	D	n	D	n	Ω	Ω	n	ם	D	D	ם	n	ם	D	D	D	D	n		n	ם	Ω	
PW2 PC-PW-PW2-GW4 08/10/93	RESULT		0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.35	0.30	0.40	0.45	0.50	0.37	0.30	0.30	0.55	
3W4	QUAL		<b>&gt;</b>	Þ	Þ	ם	Þ	Ω	ם	ב	ם	ם	ם	ם	n	n	ם	ם	ח	ם	ם	D	D	Þ	ם	ם	D	n	ח	Ω	Ω	D	Ω		ם	n	Ω	
PW1 PC-PW-PW1-GW4 08/10/93	RESULT		0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.35	0.30	0.40	0.45	0.50	0.28	0.30	0.30	0.55	
GW4	QUAL		Þ	ם	ם	ח	n	D	n	D	ח	n	Ω	n	Ω	ם	ב	n	Ω	ח	ח	Ω	Ω	ם	D	ח	D	n	5	כ	n	D	O	89		ב	ם	
MW6 PC-RT9-MW6-GW4 09/15/93	RESULT		0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.35	0.30	0.40	0.45	0.50	0.19	1.50	0.30	0.55	
-GW4	QUAL		<b>&gt;</b>	Þ	Ω	n	n	n	Ω	ח	D	D	ם	n	D	<b>-</b>	D	n	Ω	n	ח	Ω	n	D	ר	Ω	n	n		ם	D	D	D	æ	ם	n	n	
MW5 PC-RT9-MW5-GW4 09/15/93	RESULT	,	0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.13	0.30	0.40	0.45	0.50	0.83	0.30	0.30	0.55	
GW4	QUAL		>	ם	Ω	Ω	Ω	Ω	Ω	Ω	n	Ω	n	ם	ם	n	ם	ם	Ω	n	n	Þ	n	D	ם	ם	ח	D	n	Ω	Ω	Ω	n	<b>B</b>		n	D	
MW4 PC-RT9-MW4- 09/08/93	RESULT		0.35	0.35	0.40	0.25	0.35	0.35	0.35	0.35	0.30	0.25	0.30	0.30	0.20	0.30	0.25	0.20	0.40	0.25	0.35	0.85	0.25	0.40	0.50	0.35	0.35	0.50	0.35	0.30	0.40	0.45	0.50	0.81	1.70	0.30	0.55	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:		I, I, I, Z-Tetrachioroethane ug/l	i,1,1-Trichloroethane ug/l	.,1,2,2-Tetrachloroethane ug/l	,1,2-Trichloroethane ug/l	,1-Dichloroethane ug/l		,2,3-Trichloropropane ug/l	,2-Dibromoethane ug/l	,2-Dichlorobenzene ug/l	,2-Dichloroethane ug/l	,2-Dichloropropane ug/l	,2-trans-Dichloroethylene ug/l	,3-Dichlorobenzene ug/l	.3-cis-Dichloropropylene ug/l	,3-trans-Dichloropropylene ug/l	,4-Dichlorobenzene ug/l	2-Chloroethylvinyl ether ug/l	2-Chlorotoluene ug/l	4-Chlorotoluene ug/l	Bromobenzene ug/l	Bromochloromethane ug/l	Bromodichloromethane ug/l	Bromoform ug/l	Carbon Tetrachloride ug/l	Chlorobenzene ug/l	Chloroethane ug/l	Chloroform ug/l	Dibromochloromethane ug/1	Dibromomethane ug/l	Methyl bromide ug/l	Methyl chloride ug/l	Methylene chloride ug/l	Tetrachloroethylene ug/l	Trichloroethylene ug/l	Vinyl chloride ug/l	
		8010	1,1,1	1,1,1	1,1,2	1,1,2	1,1-1	1,1-D	1,2,3	1,2-L	1,2-L	1,2-L	1,2-L	1.2-tr	1,3-L	1.3-6	1,3-tr	1,4-L	2-Ch	2-Ch	4-Ch	Brom	Вгоп	Вгоп	Bron	Carb	Chlo	Chlo	Chlo	Dibr	Dibr	Meth	Meth	Meth	Tetra	Trick	Viny	

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

GW4	QUAL	æ	_		)	D			Þ	D			Þ			Ω	Ω	D	n	n	Þ	Ω	D	n	Þ	D	<b>)</b>	<b>&gt;</b>	>	ם	ב	ם	<b>&gt;</b>	<b>)</b>	Þ		
PW3 PC-PW-PW3-GW4 08/10/93	RESULT	0.73	0.20	0.00		0.50	0.38	1	0.35	0.25	0.20	5	0.25	0.18		\$	5	70	\$	· <b>v</b> o	S	50	s	vs	S	S	20	<b>S</b>	S	20	S	\$	70	NO 1	w		
3W4	QUAL	æ	ם	=	•	ם	Ø		D	D	-	Þ	Þ	æ		n	כ	Þ	n	בי	ם	ח	ח	n	ם	ח	Þ	>	D	Þ	ם	Þ	<b>-</b>	<b>D</b>	כ		
PW2 PC-PW-PW2-GW4 08/10/93	RESULT	0.31	0.20	0 20	27:	0.50	0.36	•	0.35	0.25	0.09	\$	0.25	0.17		S	\$	20 20	·	, <b>v</b> o	v	20	\$	5	5	S	50	S	2	20	2	s.	20	S	<b>S</b>		
GW4	QUAL	a	=	> =	•		D		Þ	D	D	n	n	B		n	n	ם מ	=	ם	n	ם	D	ם	Þ	n	>	D	Þ	n	D	ח	D	<b>&gt;</b>	Þ		
PW1 PC-PW-PW1-GW4 08/10/93	RESULT	AT 0	0.70	02.0	0.03	}	0.15	0.03	0.35	0.25	0.20	s	0.25	0.12		\$	v	20	, ~	, vo	· <b>S</b>	20	5	5	5	5	20	S	<b>S</b>	70	\$	ς.	20	S	S		
GW4	QUAL		щ	םנ	۵				-		•	-				כ	=	> =	· =	) <b>&gt;</b>	. –	o ס	n	Ω	Ω	n	n		ב	ם	n	כ	n	n	Ω		
MW6 PC-RT9-MW6-GW4 09/15/93	RESULT	2,60	860.5	01.0	800.19	} '	18	510	3.90	0.93	1.40	1.30	0.78	3.10		v	. •	, E	•	, v	25	2 8	ν,	5	S	\$	20	47	S	20	\$	5	20	\$	5		
-GW4	QUAL	:	<b>=</b>	=	>	Ξ	. α	I	n	ב	Ω	ם	Ω	В		П	=	=	> =	) <b>)</b>	· =	ם	D	O	Ω	n	n	n	ם	ם	n	D	n	n	Ω		
MW5 PC-RT9-MW5-GW4 09/15/93	RESULT	91.0	0.10	0.50	0.40	0.50	0.18		0.35	0.25	0.20	5	0.25	0.22		v	, v	, 00	ş v	יא ני	, <b>v</b>	<sup>2</sup> 0	٠,	. \$	S	5	20	5	\$	20	S	s	20	S	ĸ		
-GW4	QUAL	:	<b>&gt;</b> =	ء د	Ω	=	) Þ	•	Ω	Ω	n	Ω	D	Ω		Ξ	=	> <b>=</b>	) <b>=</b>	<b>=</b>	· =	ם מ	Ω	· >	ר	Ω	D	n	n	n	D	D	n	n	Ω		
MW4 PC-RT9-MW4-GW4 09/08/93	RESULT	•	0.13	07.0	0.70	05.0	0.15	;	0.35	0.25	0.20	5	0.25	0.25		v	, <b>v</b>	, C	3 4	. <b>.</b>	, vr	20	; v	S	5	5	70	\$	s	20	5	5	20	5	5		
LOCATOR: SAMPLE ID: TION DATE:	UNITS:		ug/1	n Mari	ng/l	ug/1	1/8/1	1/91	ne/l	1197	ng/]	ug/I	ug/l	ug/1		1/611	1/9n	1/8/1	(g)	l/gn	1/90	ng/l	1/611	ug/1	ug/l	l/gn	ug/l	l/gn	ug/l	l/gn	l/gu	l/gn	ug/l	ng/l	ug/I	8 a. 3	
LOCATOR: SAMPLE ID: COLLECTION DATE:																	(00000	орапел									enol							ether	loi		
ช			senzene	oenzene	Senzene	oenzene chalbanzan	uny nocincer	hanzana	2	و د		/l Ether				ohousene	Chloring	I-Canoropi	i opiiciioi	ropnenoi	pilotto	nenol	luene	luene	thalene	lot	-Dinitroph	hthalene	loi	ø	-	obenzidine	ė) ė)	nyl phenyl	nethyl phe		34 . i. . i.
	ř	8020	1,2-Dichlorobenzene	1,2-Dimemyi	1,3-Dichlorobenzene	1,3-Difficulty to enterine	1.5/1.4-Jimeniyioenz 1.4-Dichlorobenzene	1 4. Dimethylhenzene	Benzene	Chlorohenzene	Ethylbenzene	Methyl-t-Butyl Ether	Styrene	Toluene	1.00.1	LCBIVA 1 2 4 Trichlombenzene	1,2,7-killeline	2.2 -Oxyois(1-Cinotopropane)	2.4,3-111cille	2.4.0-1 richlorophenol	2.4-Diemethulphenol	2.4-Dinitrophenol	2 4-Dinitrofoluene	2.6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methyl-4,6-Dinitrophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	4-Bromophenyl phenyl ether	4-Chloro-3-methyl phenol		¥.

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

	LOCATOR:	MW4		MW5		MW6		PW1		PW2		PW3	
COLL	SAMPLE ID: COLLECTION DATE:	PC-RT9-MW4-GW4 09/08/93	/4-GW4 93	PC-RT9-MWS-GW4 09/15/93	S-GW4 3	PC-RT9-MW6-GW4 09/15/93	/6-GW4 93	PC-PW-PWI-GW4 08/10/93	-GW4	PC-PW-PW2-GW4 08/10/93	2-GW4 )3	PC-PW-PW3-GW4 08/10/93	3-GW4 93
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloroaniline	l/gu	v	D	s	D	S	n	85	n	8	D	S	ם
4-Chlorophenyl phenyl ether		S	n	S	n	s	n	S	n	ς.	Ω	vo	Þ
4-Methylphenol	l/gu	S	Ω	S	n	7		5	Ω	S	n	S	D
4-Nitroaniline	I/gu	20	Ω	20	ם	20	Ω	20	n	70	Ω	20	D
4-Nitrophenol	l∕gu	20	n	20	D	20	D	20	n	20	n	20	ם
Acenaphthene	I/gu	5	Ω	5	D	1		s	ח	\$	n	5	n
Acenaphthylene	I/gu	S	Ω	5	Ω	5	n	5	n	5	n	\$	D
Anthracene	l/gu	2	Ω	5	Ω	5	Ω	S	D	5	Ω	5	D
Benzo(a)anthracene	l/gn	s	Ω	\$	n	5	n	5	D	5	n	5	Ω
Benzo(a)pyrene	l/gu	\$	Ω	5	n	5	Ω	5	Ω	5	D	\$	Ω
Benzo(b)fluoranthene	l/gu	5	n	5	D	5	n	5	Ω	\$	Ω	S	Ω
Benzo(ghi)perylene	I/gu	s	Ω	5	D	s.	n	\$	n	S	n	\$	ם
Benzo(k)fluoranthene	l/gn	\$	n	\$	D	S	Ω	5	n	\$	Ω	\$	n
Butyl benzyl phthalate	l/gu	5	ם	5	D	5	ח	5	Ω	ν:	D	\$	D
Chrysene	I/gu	S	n	\$	D	5	n	5	n	\$	כ	\$	ח
Di-n-butyl phthalate	l/gu	ĸ	D	09.0	<b>B</b>		B	5	ם	8	D	5	n
Di-n-octyl phthalate	l/gu	S	D	\$	n	5	Þ	5	Ω	\$	n	5	n
Dibenzo(a,h)anthracene	l/gu	\$	D	5	n	\$	Þ	5	n	×Ω	ב	\$	ם
Dibenzofuran	l/gu	2	D	5	Ω	\$	ם	5	n	s.	D	S	ם
Diethyl phthalate	l∕gu		D	5	Ω	\$	Þ	06.0	<b>i</b> (	S	D	ν,	Þ
Dimethyl phthalate	l/gu	S	D	5	Ω	5	n	5	Ω	5	n	S	D
Fluoranthene	l/gu	S	D	5	D	'n	ח	5	ם	5	Ω	<b>1</b> 0	ם
Fluorene	l/gu	5	D	5	ב	0.80	0	S	D	S	D	ν.	D
Hexachlorobenzene	l/gn	S	D	S	Ω	S	Þ	\$	D	\$	Ω	so.	D
Hexachlorobutadiene		Ś	n	\$	ם	\$	n	2	D	5	Ω	\$	ם
Hexachlorocyclopentadiene		S	n	2	ר	5	D	S	D	5	n	ς.	ם
Hexachloroethane	l/gu	S	Ω	5	n	S	Ω	\$	D	5	D	<b>S</b>	Þ
Indeno(1,2,3-c,d)pyrene	l/gn	5	Ω	\$	n	5	Ω	\$	D	ν,	Ω	\$	ם
Isophorone		5	Ω	S	n	5	Ω	S	D	ν,	D	5	ם
N-Nitrosodi-N-Propylamine		2	n	\$	n	5	n	S	D	S	ח	s,	ם
N-Nitrosodiphenylamine	l/gu	\$	Ω	5	ם	5	Ω	S	Þ	S	ח	5	ם
Naphthalene	l/gu	S.	n	S	D	48		S	D	v.	D	\$	ם
Nitrobenzene	l/ẩn	S	n	<b>S</b>	D	5	n	S	D	s.	D	2	D
Pentachlorophenol	l∕gn	20	ם	20	ם	20	n	20	n	20	n	20	n
Phenanthrene	l/gn	\$	D	S	D	0.80	<u>0</u>	5	Þ	S	D	2	n
Phenol	√gn	S	Ω	\$	n	<b>S</b>	Þ	7	<b>-</b>	5	D	S	n

Appendix L - Groundwater Analytical Results from Remedial Investigation Alpena CRTC, Alpena, MI

4	ΑΓ	Ω	D	n	æ			D	ם	n	· =	) <b>:</b>	<b>:</b>	<b>&gt;</b> :	Þ	D	ם	Ω	=	) =	۰ د	>;	)	D	ď	ם	Ω	D		=	) =	· =	>									
v3 W3-GW 0/93	QUAL				0.90											_						2.70	7	0.20	0.20	90	18			. 4	<b>.</b>	۰,	٠.	. د	<del></del> ,	7		•	t			
PW3 PC-PW-PW3-GW4 08/10/93	RESULT	S	ς.	\$	0	•		35	35	4			- '		***	•	•	-			•	•	•		_	=	=						-	70	111	112						
GW4	QUAL	n	ם	Þ	8	1		ם	Ω	=	) <b>:</b>	<b>)</b> ;	<b>)</b> ;	<b>D</b>	Þ	ם	D	=			<b>&gt;</b> :	<b>&gt;</b> 1		Þ	ďΩ		n	Ē		· =	<b>&gt;</b> =	•	ָר ה		0			٠	_			
PW2 PC-PW-PW2-GW4 08/10/93	RESULT	<b>~</b>	S	S	0.60			35	35	4	•	<b>.</b>	-	,	33	e	oc	o	•	4.10	4 (	2	7	0.20	0.20	18	<u>s</u>		· =	•	<b>:</b> <	•	ויי	<b>≃</b>	16.40	8.90		ì	0.70			
W4	QUAL	D	Þ	ב	~	2		8	ä	3 6	3:	י כ	>	ם	ב	n	=	=	۽ د	<b>n</b> ;	>	>	Þ	Þ	ΩΓ	ם	=	Έ	7	י ב	<b>)</b> :	· :	7	J <sub>O</sub>	0	Ó						
PW1 PC-PW-PW1-GW4 08/10/93	RESULT Q	ν.	ν:	· <b>v</b> :		-		44.40	38 50	00.90	0	4	_	_		er.	, «	9	•	0.4	4	7	7	0.20	0.20	18	2 2	. "	) <u>=</u>	٠ -	4 -	4.	m (	m	15.70	8.60		•	0.30			
W4	QUAL	n	1	ם כ	, ρ	Q		n	· =	) <b>\</b>	: ۲	>	>	D	n	Ξ	>	=	>	i	Þ			D	n	=	<b>=</b>	) <u>:</u>	, ,	າ ;	<b>&gt;</b> :	>	75	5		C	•		m			
MW6 PC-RT9-MW6-GW4 09/15/93	RESULT Q	v	. •	, v	. ~	t		45	÷ ;	0000	10.80	4	4	-	<b>~</b>	۰, ۳	י אר סר אר	07:67	× ;	57.80	4	267	15.90	0.20	0.20	35	<u> </u>	16	ח ני	¥ ·	4	4	m	m	67.20	6.30			11.40			
	QUAL	ם	· <b>=</b>	) <b>=</b>	ء د	ú		=	) :	<b>ɔ</b> ;	>	Þ	D	Þ	n	· =	) <b>:</b>	o :	0	Þ	Þ	D	Tn		=	) <b>:</b>	<b>&gt;</b>	<b>:</b>	⁻ :	nr n	<b>-</b>	>	'n	ď	Ω	ח			M			
MW5 F9-MW5-G7 09/15/93		<b>v</b>	, <b>v</b>	· •		7		35	7		4	4	_	_	647	, ~			<b>∞</b>	4	4	2	7	0,00	020	77.0	9 9	٥,	<b>,</b>	~	4	4	3	r	4	4			1.10			
MW5 PC-RT9-MW5-GW4 09/15/93	RESULT								, (	• •																																
GW4	QUAL	=	=	<b>&gt;</b> =	۶ د	20		æ	: ۵	)		Þ	0	D	=	:			)		0		ď								D	ם	Π	UL		8			M			
MW4 PC-RT9-MW4-GW4 09/08/93	RESULT	v	, <b>u</b>	n <b>v</b>	n (	7		61 60	01.00	35	23	4	2.70	_		י נ	2	/8.80	∞	90.10	5.70	88	2	20	0.20	02.0	7.4.6	× 1 × 1	22.70	9	4	4	æ	3	176	09 \$			0.40			
	UNITS:	l voi	n K	1/gn	1/gn	ng/l			ug/1	ng/l	l/gn	l/gn	l/gn	1/611	1,50	l/gu	ng/l	l/gn	ng/l	l/gn	ug/l	ug/l		1/8n	1/Sin	ng/I	ng/l	ng/l	ng/l	ng/l	ng/l	ug/l	ng/l	ug/l	ng/l	\ \ !	è		mg/l			ser Ser Ser
LOCATOR: SAMPLE ID: COLLECTION DATE:		1. 1. 4.		 3		.). 48	jan.																													eja.	105.0		suo			
COLL				methane	ther	thalate			ř.	Ţ,				7	2		9		'ed							70				72				-					ydrocarb			
				roethoxy,	roethyl) c	hexyl)ph				Dissolve		issolved		Dissola	A I Design		Dissolve	: ا ا	i, Dissolv		issolved		bessler	solved		Dissolve		issolved		Dissolve		ssolved	i . Eve	Dissolve			ng ning		oleum H			
		ı	ryrene	bis(2-Chloroethoxy)methane	bis(2-Chloroethyl) ether	bis(2-Ethylhexyl)phthalate	į	METALS	Antimony	Antimony, Dissolved	Arsenic	Arsenic, Dissolved	Rervllium	Describing Dissolved	Detyment,	Cadmium	Cadmium, Dissolved	Chromium	Chromium, Dissolved	Copper	Conner, Dissolved	Lead	1 and Dissolved	Lead, DIS	Mercury	Mercury, Dissolved	Nickel	Nickel, Dissolved	Selenium	Selenium, Dissolved	Silver	Silver, Dissolved	Thallium	Thallium Dissolved	Zinc	1	Zille, Dissolved	ТРН	Total Petroleum Hydrocarbons	e Uhij Saura	i uit	

Appendix M: Facilty-wide Soil and Groundwater Background Determination Data

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## Facility-wide Soil Background Determination and Data

When local background levels are higher than the health based cleanup criteria for metals, MDNR allows the use of the local background levels in place of the cleanup criteria. Soil samples have been collected during three separate sampling events (Engineering Science 1990, Earth Technology, July 1992, and the summer 1993 RI sampling activities) to provide the data necessary to calculate facility-wide inorganic background concentrations. Soil samples during all three events were collected from areas relatively undisturbed by human activity or away from known waste handling areas. The following sections describe the method of calculating background levels at the installation.

The area primarily consists of fine - to - medium grained quartz sand, with clay only in some areas. To obtain background levels that are most representative of the area, samples of both soil types were collected. Fifteen quartz sand samples were collected in the Sports Field and five additional quartz sand samples were collected north of Site 5. The samples were analyzed for 12 priority pollutant metals and the results were statistically analyzed, (according to MDNR, "Verification of Soil Remediation", October 25, 1990), to determine high outliers. After any high outliers were eliminated, background was determined for each metal.

The statistical analysis was completed by determining the mean, variance, standard deviation, and coefficient of variation. If the coefficient of variation was greater than 0.5, the highest number was chosen as a suspected outlier. If the suspected outlier was greater than three times the standard deviation of the mean of all the values except the suspected outlier, that value was eliminated from the data. When all necessary outliers were eliminated, background levels were calculated by adding the statistically analyzed mean to three times the standard deviation of that mean. Table M-1 presents the quartz sand data and statistical analysis results without coefficient of variation modification. Table M-2 presents the quartz sand data with coefficient of variation modifications.

Four quartz sand samples containing clay were collected from Sites 4 and 6. The results were statistically analyzed in the same manner as stated above. The statistical analysis detected high outliers in the arsenic and selenium data. Since MDNR requires at least four samples to determine background, these outliers were replaced with data from samples PCHN8MW1SS1. The statistical analysis was performed again. The arsenic data produced a coefficient of variation below 0.5, but the selenium data produced a coefficient of variation greater than 0.5 and the result from sample PCHN8MW1SS1 was greater than three times the standard deviation of the statistically analyzed mean. Since no additional background samples were taken, the MDNR health-based background level was used for selenium. Table M-3 presents the quartz sand with clay data and statistical analysis results without coefficient of variation modification. Table M-4 presents the quartz sand with clay data with the coefficient of variation modifications.

Table M-5 presents final background levels. Since there are no distinct delineations at the installation where the sand contains large amounts of clay, the quartz sand background levels were averaged with the quartz sand with clay background levels. These final background values provide levels that are most representative of the installation. The final background levels were compared to the MDNR cleanup criteria and the higher of the two levels was chosen as the background value.

Table M-1 Data for Background Determination Quartz Sand Data - Statistically Unmodified MIANG, Alpena CRTC, Alpena, MI Units: mg/kg

0"-6"       12"-18"       24"-30"       12"-18"       24"-30"         CCL       CCL       CCL       CCL       CCL         *       *       *       *       *         *       1.9       0.61       0.71       0.65       0.81         *       1.9       0.61       0.71       0.65       0.81         *       1.9       0.61       0.71       0.65       0.81         *       1.4       3.4       2.9       3.7       3.3         *       1.6       1.1       0.75       3.9       0.85         *       1.6       1.1       0.75       3.9       0.85         *       1.5       0.89       2.8       1.7         *       0.93       2.7       2.2       2.1         *       0.93       2.7       2.2       2.1         *       0.94       0.66       0.64         *       0.05       0.21       0.22       0.21	Site: Locator:	PCBG1 SB1	PCBG1 SB1	PCBG1 SB1	PCBG1 SB1	PCBG1 SB1	PCBG1 SB1	PCBG1 SB1	PCBG1 SB1
3.8       3.9       3.8         1.9       0.61       0.71       0.65       0.81         0.53       0.53       0.53       0.53         1.4       3.4       2.9       3.7       3.3         1.6       1.1       0.75       3.9       0.85         3.5       1.5       0.89       2.8       1.7         0.93       2.7       2.2       3.2       2.1         1.1       0.32       0.31       0.32       0.32         0.86       0.21       0.22       0.21         0.86       0.21       0.22       0.21	Date: Depth: Lab: Source:		12"-18" CCL	24"-30" CCL	12"-18" CCL *	24"-30" CCL	0"-6" CCL *	0"-6" CCL.	12"-18" CCL
1.9     0.61     0.71     0.65     0.81       1.4     3.4     2.9     3.7     3.3       1.6     1.1     0.75     3.9     0.85       1.6     1.1     0.75     3.9     0.85       3.5     1.5     0.89     2.8     1.7       0.93     2.7     2.2     3.2     2.1       1.1     0.32     0.31     0.32     0.32       0.86     0.21     0.21     0.66     0.64       0.86     0.21     0.21     0.21	Antimony:		æ, ri		6. 6.	9.8	4.7	3.9	3.7
0.53     0.55     0.53       1.4     3.4     2.9     3.7     3.3       1.6     1.1     0.75     3.9     0.85       3.5     1.5     0.89     2.8     1.7       0.93     2.7     2.2     3.2     2.1       1.1     0.32     0.31     0.32     0.32       0.86     0.21     0.22     0.21	Arsenic:	1.9	0.61	0.71	0.65	0.81	1.7	0.82	0.88
1.4     3.4     2.9     3.7     3.3       1.6     1.1     0.75     3.9     0.85       3.5     1.5     0.89     2.8     1.7       0.93     2.7     2.2     3.2     2.1       1.1     0.32     0.31     0.32     0.32       0.86     0.054     0.021     0.22     0.21	Cadmium:		0.53		0.55	0.53	0.65	0.54	0.52
1.6     1.1     0.75     3.9     0.85       3.5     1.5     0.89     2.8     1.7       0.93     2.7     2.2     3.2     2.1       1.1     0.32     0.31     0.32     0.64       0.86     0.21     0.21     0.21     0.21	Chromium:	1.4	3.4	2.9	3.7	3.3	1.7	2.9	3.4
3.5     1.5     0.89     2.8     1.7       0.11     0.11     0.11     0.11       0.93     2.7     2.2     3.2     2.1       1.1     0.32     0.31     0.32     0.32       1.1     0.64     0.66     0.64       0.86     0.21     0.21     0.21	Copper:	1.6	1.1	0.75	3.9	0.85	2.8	0.91	8.0
0.93 2.7 2.2 3.2 2.1 1.1 0.32 0.31 0.33 0.32 0.66 0.64 0.21 0.22 0.21	Lead:	3.5	1.5	0.89	2.8	1.7	13.8	1.5	1.5
0.93     2.7     2.2     3.2     2.1       1.1     0.32     0.31     0.32     0.32       0.64     0.66     0.64       0.86     0.21     0.21     0.21	Mercury:		0.11		0.11	0.11	0.13	0.11	0.1
1.1     0.32     0.31     0.33     0.32       0.64     0.66     0.64       0.86     0.21     0.21     0.21	Nickel:	0.93	2.7	2.2	3.2	2.1	1.1	1.9	2.4
0.64 0.66 0.64 0.86 0.21 0.22 0.21	Selenium:		0.32	0.31	0.33	0.32	0.39	0.32	0.31
0.86 0.21 0.21 0.22 0.21	Silver:		0.64		99.0	0.64	0.78	0.65	0.62
000	Thallium:	0.86	0.21	0.21	0.22	0.21	0.26	0.22	0.21
6.3 4.7 3.1 6.6 10.9	Zinc:	6.3	4.7	3.1	8.8	10.9	13.9	4.3	3.2

\* = Earth Technology, July 1992 sampling activities

Table M-1, continued

Site: Locator:	PCBG1 SB3	PCBG1 SB4	PCBG1 SB4	PCBG1 SB4	PCBG1 SB5	PCBG1 SB5	PCBG1 SB5	P00 B1
Date: Depth: Lab: Source:	24"-30" CCL *	12"-18" CCL *	24"-30" CCL *	* CCL *	0"-6" CCL.	12"-18" CCL	24"-30" CCL	2:-3' CCL @
Antimony:	3.7	3.7	3.7	4				4.7
Arsenic:	0.57	0.77	0.52	0.85	2.9	0.81	1.5	0.48
Cadmium:	0.52	0.52	0.52	0.55				0.53
Chromium:	2.9	4.2	2.5	2	2.5	3.8	3.6	2.8
Copper:	13.3	1.2	0.68	0.99	0.24	1.7	1.9	1.6
Lead:	96.0	1.4	0.7	2.3	18.7	1.4	0.77	<del></del>
Mercury:	0.1	0.1	0.1	0.11				0.11
Nickel:	1.5	3.9	2	_	3.6	3.1	3.1	3.7
Selenium:	0.31	0.31	0.31	0.33	0.47	0.41	0.41	0.32
Silver:	0.62	0.62	0.62	0.67				0.42
Thallium:	0.21	0.21	0.21	0.22	0.35	0.3	0.31	0.32
Zinc:	14.9	3.9	3.4	4.6	22.3	6.1	14.9	3.8

\* = Earth Technology, July 1992 sampling activities @ = Earth Technology, summer 1993 sampling activities

Table M-1, continued

Site: Locator: .	P00 B1	P00 B2	P00 B2	P00 B1					,
Date: Depth: Lab: Source:	9'-10' CCL @	0'-1' CCL ©	2'-3' CCL @	0'-1' CCL @					
					MEAN	VARIANCE	STD DEV	C	BACKGROUND
Antimony	4.7	5.8	5.3	4.8	4.28	0.42	0.65	0.15	6.23
Arsenic	0.57	0.52	1.7	0.78	1.00	0.37	0.61	09.0	2.82
Cadmium:	0.53	0.64	0.58	0.53	0.55	0.00	0.04	0.07	0.67
Chromium:	2.1	5.6	4.5	5.2	3.07	98.0	0.92	0.30	5.84
Conner:	9.	6.	5.6	1.6	2.10	7.28	2.70	1.28	10.20
l ead:	0.88	4.	4.	ິຕ	3.06	20.47	4.52	1.48	16.63
Mercury:	0.11	0.13	0.12	0.11	0.11	8.62E-5	0.01	0.08	0.14
Nickel	3.7	4.5	4.1	3.7	2.72	1.14	1.07	0.39	5.93
Selenium	0.32	0.39	0.63	0.32	0.40	0.03	0.18	0.45	0.93
Silver	0.42	0.52	0.47	0.42	0.58	0.01	0.10	0.18	0.00
Thallium:	0.32	0.39	0.35	0.32	0.30	0.02	0.14	0.48	0.72
Zinc:	3.8	15.3	9.6	11.4	8.46	28.48	5.34	0.63	24.47

@ = Earth Technology, summer 1993 sampling activities

Table M-2
Data for Background Determination
Quartz Sand - Statistically Modified
MIANG, Alpena CRTC, Alpena, MI

Site: Locator:	PCBG1 SB1	PCBG1 SB1	PCBG1 SB1	PCBG1 SB1		PCBG1 SB1	PCBG1 SB1	PCBG1 SB1
Depth: Lab: Source:	0"-6" CCL \$	12"-18" CCL	24"-30" CCL *	12"-18" CCL *	24"-30" CCL *			12"-18" CCL
Antimony:	,	3.8		3.9		4.7	3.9	3.7
Arsenic: Cadmium:	1.9	0.61 0.53	0.71	0.65 0.55		1.7 0.65	0.82 0.54	0.88 0.52
Chromium:	4.6	3.4	2.9	3.7		1.7	2.9	3.4
Lead:	3.5	1.5	0.89	2.8		)	1.5	. <del>.</del>
Mercury: Nickel:	0.93	0.11 2.7	2.2	0.11 3.2	0.11 2.1	0.13 1.1	0.11 1.9	0.1
Selenium: Silver:	1.1	0.32	0.31	0.33		0.39	0.32	0.31
Thallium:	0.86	0.21	0.21	0.22		0.26	0.22	0.21
Zinc:	6.3	4.7	3.1	8.8			4.3	3.2

= Earth Technology, July 1992 sampling activities

Table M-2, continued

Site: Locator:	PCBG1 SB3	PCBG1 SB4	PCBG1 SB4	PCBG1 SB4	PCBG1 SB5	PCBG1 SB5	PCBG1 SB5	P00 B1
Date: Depth: Lab: Source:	24"-30" CCL *	12"-18" CCL	24"-30" CCL.	* CCL *		12"-18" CCL *	24"-30" CCL	2'-3' CCL @
Antimony: Arsenic:	3.7	3.7	3.7 0.52	0.85 0.85		0.81	1.5	4.7 0.48 0.53
Chromium:	2.9	4.2	2.5 2.5 0.68	2.33 0.99	2.5	3.8	3.6	2.8
Lead:	0.96	4.1.	0.00	2.3 0.11	r 	4.	0.77	0.11
Nickel:	 	9.6	2 2 2 2 2 3 2 4	1 0	0.36	3.1	3.1	3.7
Selenium:   Silver:	0.62	0.62	0.62	0.67	<b>.</b>	<del>-</del>	i i	0.42
Thallium: Zinc:	0.21	0.21 3.9	0.21 3.4	0.22 4.6	0.35	0.3 6.1	0.31	0.32 3.8

\* = Earth Technology, July 1992 sampling activities @ = Earth Technology, summer 1993 sampling activities

Table M-2, continued

@ = Earth Technology, summer 1993 sampling activities

Table M-3
Data for Background Determination
Quartz Sand with Clay - Statistically Unmodified
MIANG, Alpena CRTC, Alpena, MI
Units: mg/kg

		BACKGROUND	က	2.39	0.4	11.72	1.62	9.90	0.1	3.56	3.21	0.7	4	8.45
		رد	0	0.53	0	0.38	0.27	0.44	0	0.21	0.68	0	0	0.27
	·	STD DEV	0	0.49	0	2.08	0.24	1.88	0	0.46	0.72	0	0	1.25
		VARIANCE	0	0.24	0	4.34	90.0	3.55	0	0.21	0.52	0	0	1.57
		MEAN	က	0.92	0.4	5.48	0.00	4.25	0.1	2.18	1.05	0.7	4	3.9
PCLF6 MW1	10. CCL		က	1.5	0.4	4.8	1.3	5.3	0.1	1.9	1.5	0.7	4	3.9
PCLF6 MW1	2.5' CCL #		က	1.3	0.4	3.6	0.78	4.3	0.1	2.4	7	0.7	4	3.1
PCTF4 PCTF4 PCLF6 MW1 MW1 MW1	10' CCL #		က	0.36	0.4	4.5	99.0	1.2	0.1	2.8	0.31	0.7	4	5.6
PCTF4 MW1	5. CCL #		က	0.51	0.4	6	0.85	6.2	0.1	1.6	0.4	0.7	4	6.2
Site: Locator: Date:	Depth: Lab: Source:		Antimony:	Arsenic:	Cadmium:	Chromium:	Copper:	Lead:	Mercury:	Nickel:	Selenium:	Silver:	Thallium:	Zinc:

# = Engineering Science, 1990 sampling activities

Table M-4
Data for Background Determination
Quartz Sand with Clay - Statistically Modified
MIANG, Alpena CRTC, Alpena, MI

		BACKGROUND	က	2.17	0.40	11.72	1.62	06.6	0.10	3.56	2.12	0.70	4	8.45
		2	0.00	0.50	0.00	0.38	0.27	0.44	0.00	0.21	0.71	0.00	0.00	0.27
		STD DEV	0	0.44	0	2.08	0.24	1.88	0	0.46	0.48	0	0	1.25
		VARIANCE	0	0.19	0	4.34	90.0	3.55	0	0.21	0.23	0	0	1.56
		MEAN	က	0.87	0.40	5.48	0.00	4.25	0.10	2.18	0.68	0.70	4	4.7
PCHN8 MW1	2.5'-5'			1.3							0.5			
CLF6	.0#		က		0.4	4.8	1.3	5.3	0.1	1.9	1.5	0.7	4	3.9
PCLF6 MW1	2.5,		က	1.3	0.4	3.6	0.78	4.3	0.1	2.4		0.7	4	3.1
PCTF4 MW1	,0 #		က	0.36	0.4	4.5	99.0	1.2	0.1	2.8	0.31	0.7	4	5.6
PCTF4 PCTF4 PCLF6 F	# Qi		ຸ ຕ	0.51	0.4	6	0.85	6.2	0.1	1.6	0.4	0.7	4	6.2
Site: Locator: Date:	Depth: Source:		Antimony:	Arsenic:	Cadmium:	Chromium:	Copper:	Lead:	Mercury:	Nickel:	Selenium:	Silver:	Thallium:	Zinc:

# = Engineering Science, 1990 sampling activities

Table M-5
Data for Background Determination
Quartz Sand Background Values Averaged with Quartz Sand with Clay Background Values
MIANG, Alpena CRTC, Alpena, MI
Units: mg/kg

	Quartz Sand Background Values	Quartz Sand with Clay Background Values	Final Local Background Values
Antimony	6.23	3	4.62
Arsenic	2.2	2.17	2.18
Cadmium	0.67	0.40	0.54
Chromium	5.84	11.72	8.78
Copper	3.33	1.62	2.48
Lead	3.93	9.90	6.92
Mercury	0.14	0.10	0.12
Nickel	5.93	3.56	4.74
Selenium	0.93	2.12	1.52
Silver	0.90	0.70	0.80
Thallium	0.72	4	2.36
Zinc	14.25	8.45	11.35

**Groundwater Background Determination Data** 

Data for Background Calculations of Groundwater Alpena CRIC, Alpena, MI

METHOD	CLP	GEP.	CLP	CLP	a di	di di	CLP	CITE	GT.P	CLP	di.	CIP	GLP CLLP	GIP.	CITS	CLP	GIP	CLP	GE	CLP	GIP	d d	GIP.	GLP CLP	GLP	GLP	CITA	GT.	<b>GIT</b>	CITY	CIP	di G	CLP	CLP	CLP.
UNITS	ug/1	ug/1	ug/l	1/6n	ug/1	ug/1	ng/l	ng/1	1/6n	ng/1	<b>ng/1</b>	ng/1	ng/1	ug/1	ug/1	ug/1	ng/1	ug/1	ng/1	ng/1	ng/1	ug/1	ng/1	ug/1	ng/1	ng/1	ng/1	ug/1	ug/1	1/6n	ug/1	ng/1	ug/1	ng/1	ug/1
QUALIFIER			ĕ	ğ	QX	QX	Ð	ğ	QX	QN	CM	Q	QX	Q.	QN			QN	Q.	Q.	æ	Ş	<u>Q</u>	<b>E</b>	æ	Ð	Q.	Q.	æ	<b>Q</b>	QX	₽ Q	Q¥	Ç.	QN
RESULT	830.00	12000.00	16.00	0.50	0.15	2.00	3.50	3.00	0.50	0.25	7.50	1.00	3.50	20.00	1.00	1900.00	900.006	16.00	0.50	0.15	2.00	3.50	3.00	0.50	0.25	7.50	1.00	3.50	20.00	1.00	0.25	7.50	1.00	3.50	20.00
ANALYTE	Potassium, Dissolved	Sodium, Dissolved	Antimony, Dissolved	Arsenic, Dissolved	Beryllium, Dissolved	Cadmium, Dissolved	Chromium, Dissolved	Copper, Dissolved	Lead, Dissolved	Mercury, Dissolved	Nickel, Dissolved	Selenium, Dissolved	Silver, Dissolved	Thallium, Dissolved	Zinc, Dissolved	Potassium, Dissolved	Sodium, Dissolved	Antimony, Dissolved	Arsenic, Dissolved	Beryllium, Dissolved	Cadmium, Dissolved	Chromium, Dissolved	Copper, Dissolved	Lead, Dissolved	Mercury, Dissolved	Nickel, Dissolved	Selenium, Dissolved	Silver, Dissolved	Thallium, Dissolved	Zinc, Dissolved	Mercury, Dissolved	Nickel, Dissolved	Selenium, Dissolved	Silver, Dissolved	Thallium, Dissolved
MATRIX	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE	GROUNDWATE

Data for Background Calculations of Groundwater Alpena CRIC, Alpena, MI

SAMPLE ID	MATRIX	ANALYTE	RESULT	QUALIFIER	UNITS	METHOD
PC-TF4-MW1-GW1	GROUNDWATE	Zinc, Dissolved	1.00	Č.	ng/1	d Th
PC-TF4-MW1-GW1	GROUNDWATE	Antimony, Dissolved	16.00	Q.	ug/1	CLP
PC-TF4-MW1-GW1	GROUNDWATE	Arsenic, Dissolved	0.50	QX	ug/1	CLP
PC-TF4-MW1-GW1	GROUNDWATE	Beryllium, Dissolved	0.15	QX	ng/1	CLP
PC-TF4-MW1-GW1	GROUNDWATE	Cadmium, Dissolved	2.00	Q.	ug/1	CLP
PC-TF4-MW1-GW1	GROUNDWATE	Chromium, Dissolved	3.50	Q	ug/1	CLP
PC-TF4-MW1-GW1	GROUNDWATE	Copper, Dissolved	3.00	QX	ug/1	CLP
PC-TF4-MW1-GW1	GROUNDWATE	Lead, Dissolved	0.50	Q	1/6n	CLP
PC-SF5-MW2-GW1	GROUNDWATE	Potassium, Dissolved	1700.00		1/6n	CLP
PC-SF5-MW2-GW1	GROUNDWATE	Sodium, Dissolved	12000.00		ug/1	CLP
PC-SF5-MW2-GW1	GROUNDWATE	Antimony, Dissolved	16.00	Q.	1/Bn	CIP
PC-SF5-MW2-GW1	GROUNDWATE	Arsenic, Dissolved	0.50	ě	ug/1	CIP
Z PC-SF5-MW2-GW1	GROUNDWATE	Beryllium, Dissolved	0.15	ĕ	ng/1	CLP
C PC-SF5-MW2-GW1	GROUNDWATE	Cadmium, Dissolved	2.00	Q.	ug/1	CLP
PC-SF5-MW2-GW1	GROUNDWATE	Chromium, Dissolved	3.50	QN	ug/1	CILP
PC-SF5-MW2-GW1	GROUNDWATE	Copper, Dissolved	3.00	QN.	ug/1	CLP
PC-SF5-MW2-GW1	GROUNDWATE	Lead, Dissolved	0.50	ĕ	ug/1	CLP
PC~SF5-MW2-GW1	GROUNDWATE	Mercury, Dissolved	0.25	Ø.	ug/1	GLP
PC-SF5-MW2-GW1	GROUNDWATE	Nickel, Dissolved	7.50	<b>E</b>	ug/1	CILP
PC-SF5-MW2-GW1	GROUNDWATE	Selenium, Dissolved	1.00	<b>E</b>	ug/1	CLP
PC-SF5-MW2-GW1	GROUNDWATE	Silver, Dissolved	3.50	<b>EX</b>	ug/1	CITS
PC-SF5-MW2-GW1	GROUNDWATE	Thallium, Dissolved	20.00	Ę	ug/1	GE
PC-SF5-MW2-GW1	GROUNDWATE	Zinc, Dissolved	1.00	QM	ug/1	CLP
PC-HN8-MW1-GW1	GROUNDWATE	Antimony, Dissolved	16.00	<b>E</b>	ug/1	CILP
PC-HN8-MW1-GW1	GROUNDWATE	Arsenic, Dissolved	0.50	QX	ng/1	CLP
PC-HN8-MW1-GW1	GROUNDWATE	Beryllium, Dissolved	0.15	<b>CM</b>	ng/1	CILP
PC-HN8-MW1-GW1	GROUNDWATE	Cadmium, Dissolved	2.00	æ	ug/1	GEP
PC-HN8-MW1-GW1	GROUNDWATE	Chromium, Dissolved	3.50	<b>Q</b>	ug/1	CLP
PC-HN8-MW1-GW1	GROUNDWATE	Copper, Dissolved	3.00	Q.	1/6n	CILP
PC-HN8-MW1-GW1	GROUNDWATE	Lead, Dissolved	0.50	QX	ng/1	GLP
PC-HN8-MW1-GW1	GROUNDWATE	Mercury, Dissolved	0.25	QX	ug/1	CLP
PC-HN8-MW1-GW1	GROUNDWATE	Nickel, Dissolved	7.50	QN	1/6n	CIP
PC-HN8-MW1-GW1	GROUNDWATE	Selenium, Dissolved	1.00	QX	ug/1	CLP
PC-HN8-MW1-GW1	GROUNDWATE	Silver, Dissolved	3.50	QX	ug/1	CI.P
PC-HN8-MW1-GW1	GROUNDWATE	Thallium, Dissolved	20.00	QX	ug/1	GIT B

Data for Background Calculations of Groundwater Alpena CRTC, Alpena, MI

SAMPLE ID	MATRIX	ANALYTE	RESULT	QUALIFIER	UNITS	METHOD
PC-HN8-MW1-GW1	GROUNDWATE	Zinc, Dissolved	1.00	QN	ug/1	CLP
PC-MP2-MW1-GW3	GROUNDWATE	Antimony, Dissolved	18.00		ug/1	CLP
PC-MP2-MW1-GW3	GROUNDWATE	Barium, Dissolved	0.50		ng/1	CLP
PC-MP2-MW1-GW3	GROUNDWATE	Calcium, Dissolved	80800.00		1/6n	CLP
PC-MP2-MW1-GW3	GROUNDWATE	Iron, Dissolved	5.50	b	ug/1	CLP
PC-MP2-MW1-GW3	GROUNDWATE	Lead, Dissolved	1.00	Þ	ug/1	CLP
PC-MP2-MW1-GW3	GROUNDWATE	Magnesium, Dissolved	9220.00		ug/1	CLP
PC-MP2-MW1-GW3	GROUNDWATE	Manganese, Dissolved	0.50		ug/1	CLP
PC-MP2-MW1-GW3	GROUNDWATE	Potassium, Dissolved	365.00		1/6n	CLP
PC-MP2-MW1-GW3	GROUNDWATE	Sodium, Dissolved	5950.00	b	1/Bn	CLP
PC-CG3-MW1-GW3	GROUNDWATE	Antimony, Dissolved	18.00	Þ	ug/1	CLP
PC-CG3-MW1-GW3	GROUNDWATE	Barium, Dissolved	4.60		ug/1	CLP
PC-CG3-MW1-GW3	GROUNDWATE	Calcium, Dissolved	50600.00		ug/1	CLP
S PC-CG3-MW1-GW3	GROUNDWATE	Copper, Dissolved	25.30		ug/1	CLP
P PC-CG3-MW1-GW3	GROUNDWATE	Lead, Dissolved	1.00	Þ	ug/1	CLP
PC-CG3-MW1-GW3	GROUNDWATE	Magnesium, Dissolved	7900.00		ug/1	CLP
PC-CG3-MW1-GW3	GROUNDWATE	Manganese, Dissolved	0.50	Þ	ug/1	CLP
PC-CG3-MW1-GW3	GROUNDWATE	Potassium, Dissolved	3560.00		ug/1	CLP
PC-CG3-MW1-GW3	GROUNDWATE	Sodium, Dissolved	3470.00	b	ug/1	CITS
PC-TF4-MW1-GW3	GROUNDWATE	Barlum, Dissolved	6.10		ng/1	CT.P
PC-TF4-MW1-GW3	GROUNDWATE	Calcium, Dissolved	51300.00		ug/1	CLP
PC-TF4-MW1-GW3	GROUNDWATE	Iron, Dissolved	24.40		ng/1	CLP
PC-TF4-MW1-GW3	GROUNDWATE	Magnesium, Dissolved	7920.00		ug/1	GI'B
PC-TF4-MW1-GW3	GROUNDWATE	Manganese, Dissolved	0.50	Þ	ug/1	CLP
PC-TF4-MW1-GW3	GROUNDWATE	Mercury, Dissolved	0.23	מ	ug/1	CLP
PC-TF4-MW1-GW3	GROUNDWATE	Nickel, Dissolved	4.00	Ф	ug/1	CILP
PC-TF4-MW1-GW3	GROUNDWATE	Potassium, Dissolved	2500.00		ug/1	CLP
PC-SF5-MW2-GW3	GROUNDWATE	Arsenic, Dissolved	2.50	Þ	ug/1	CLP
PC-SF5-MW2-GW3	GROUNDWATE	Barium, Dissolved	9.00		ng/1	CLP
PC-SF5-MW2-GW3	GROUNDWATE	Calcium, Dissolved	35700.00		ug/1	CLP
PC-SF5-MW2-GW3	GROUNDWATE	Iron, Dissolved	21.70		ug/l	CLP
PC-SF5-MW2-GW3	GROUNDWATE	Lead, Dissolved	1.00	H H	ng/1	CLP
PC-SF5-MW2-GW3	GROUNDWATE	Magnesium, Dissolved	13300.00		1/6n	CLP
PC-SF5-MW2-GW3	GROUNDWATE	Manganese, Dissolved	2.30		ug/1	CLP
PC-SF5-MW2-GW3	GROUNDWATE	Potassium, Dissolved	3510.00		ng/1	CIP

Data for Background Calculations of Groundwater Alpena CRTC, Alpena, MI

SAMPLE ID	MATRIX	ANALYTE	RESULT	QUALIFIER	UNITS	METHOD
PC-SF5-MW2-GW3	GROUNDWATE	Sodium, Dissolved	8080.00	ט	1/Bn	CLP
PC-SF5-MW2-GW3	GROUNDWATE	Vanadium, Dissolved	3.00	Þ	ug/1	CLP
PC-HN8-MW1-GW3	GROUNDWATE	Calcium, Dissolved	69900.00		1/6n	CLLP
PC-HN8-MW1-GW3	GROUNDWATE	Lead, Dissolved	1.00	Þ	ug/1	CIP
PC-HN8-MW1-GW3	GROUNDWATE	Magnesium, Dissolved	9820.00		ug/1	CLP
PC-HN8-MW1-GW3	GROUNDWATE	Manganese, Dissolved	0.50	Þ	ug/1	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Antimony, Dissolved	17.50	Þ	1/6n	CILP
PC-MP2-MW1-GW4	GROUNDWATE	Arsenic, Dissolved	7.20	<b>c</b>	ug/1	CIP
PC-MP2-MW1-GW4	GROUNDWATE	Beryllium, Dissolved	0.50	Þ	ng/1	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Cadmium, Dissolved	1.50	Þ	ug/1	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Chromium, Dissolved	4.00	Þ	ug/1	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Copper, Dissolved	2.00	Þ	ug/1	CIP
PC-MP2-MW1-GW4	GROUNDWATE	Lead, Dissolved	1.00	Þ	ug/1	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Mercury, Dissolved	0.10	F G	ng/1	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Nickel, Dissolved	9.00	Þ	ug/1	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Selenium, Dissolved	1.50	Φ	ug/1	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Silver, Dissolved	2.00	Þ	ug/1	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Zinc, Dissolved	19.10	C	ng/1	CILP
PC-MP2-MW1-GW4	GROUNDWATE	Antimony	17.50	Þ	ug/1	GI.P
PC-MP2-MW1-GW4	GROUNDWATE	Arsenic	14.70	ĸ	ug/1	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Beryllium	0.50	Þ	ng/1	GLP
PC-MP2-MW1-GW4	GROUNDWATE	Cadmium	1.50	Þ	ug/1	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Chromium	4.00	Þ	ug/1	CILP
PC-MP2-MW1-GW4	GROUNDWATE	Copper	27.80		ug/1	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Load	4.50		ug/1	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Mercury	0.10	Þ	ng/1	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Nickel	9.00	Ð	ng/1	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Selenium	1.50	Þ	ng/1	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Silver	2.00	Þ	ng/1	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Thallium	1.50	Þ	ng/1	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Zinc	43.50		ug/1	CLP
PC-P1-MW2-GW4	GROUNDWATE	Antimony	17.50	D	ng/1	CLP
PC-P1-MW2-GW4	GROUNDWATE	Arsenic	2.00	Þ	1/Bn	CILP
PC-P1-MW2-GW4	GROUNDWATE	Beryllium	0.50	Þ	ug/1	CLP
PC-P1-MW2-GW4	GROUNDWATE	Cadmium	1.50	Þ	1/Bn	CILP

Data for Background Calculations of Groundwater Alpena CRTC, Alpena, MI

SAMPLE ID	MATRIX	ANALYTE	RESULT	QUALIFIER	UNITS	METHOD
PC-P1-MW2-GW4	GROUNDWATE	Chromium	9.90		ng/1	GLP
PC-P1-MW2-GW4	GROUNDWATE	Copper	5.10		ng/1	CLP
PC-P1-MW2-GW4	GROUNDWATE	Lead	1.00	Þ	ug/1	CLP
PC-P1-MW2-GW4	GROUNDWATE	Mercury	0.10	Þ	ng/1	CLLP
PC-P1-MW2-GW4	GROUNDWATE	Nickel	9.00	Þ	ug/1	CLP
PC-P1-MW2-GW4	GROUNDWATE	Silver	2.00	Þ	ug/1	CLP
PC-P1-MW2-GW4	GROUNDWATE	Thallium	1.50	В	ug/1	CIP
PC-P1-MW2-GW4	GROUNDWATE	Zinc	12.90	(3)	ug/1	CLP
PC-P1-MW2-GW4	GROUNDWATE	Antimony, Dissolved	17.50	Þ	ng/1	CLLP
PC-P1-MW2-GW4	GROUNDWATE	Arsenic, Dissolved	2.00	B	ug/1	CLP
PC-P1-MW2-GW4	GROUNDWATE	Beryllium, Dissolved	0.50	Þ	1/6n	CLP
PC-P1-MW2-GW4	GROUNDWATE	Cadmium, Dissolved	1.50	Þ	ug/1	CLLP
PC-P1-MW2-GW4	GROUNDWATE	Chromium, Dissolved	4.00	Þ	1/6n	CLP
S PC-P1-MW2-GW4	GROUNDWATE	Copper, Dissolved	6.30	0	ng/1	CLP
9 PC-P1-MW2-GW4	GROUNDWATE	Lead, Dissolved	1.00	B	1/6n	CLP
PC-P1-MW2-GW4	GROUNDWATE	Mercury, Dissolved	0.10	Ð	ug/1	CLLP
PC-P1-MW2-GW4	GROUNDWATE	Nickel, Dissolved	9.00	Þ	ng/1	CLLP
PC-P1-MW2-GW4	GROUNDWATE	Selenium, Dissolved	1.50	Þ	ug/1	CLP
PC-P1-MW2-GW4	GROUNDWATE	Silver, Dissolved	2.00	D	ng/1	CITE
PC-P1-MW2-GW4	GROUNDWATE	Thallium, Dissolved	1.50	B	1/6n	GIP
PC-P1-MW2-GW4	GROUNDWATE	Zinc, Dissolved	25.00		ug/1	CELP
PC-CG3-MV1-GW4	GROUNDWATE	Antimony, Dissolved	17.50	Þ	ng/1	CITE
PC-CG3-MW1-GW4	GROUNDWATE	Arsenic, Dissolved	2.00	Þ	ng/1	CLP
PC-CG3-MW1-GW4	GROUNDWATE	Beryllium, Dissolved	0.50	Ð	ng/1	CIP
PC-CG3-MW1-GW4	GROUNDWATE	Cadmium, Dissolved	1.50	Þ	1/6n	CILP
PC-CG3-MW1-GW4	GROUNDWATE	Chromium, Dissolved	4.00	D	ug/1	CLP
PC-CG3-MW1-GW4	GROUNDWATE	Copper, Dissolved	2.00	Þ	ug/1	CILP
PC-CG3-MW1-GW4	GROUNDWATE	Lead, Dissolved	2.00	C	ng/1	GE
PC-CG3-MW1-GW4	GROUNDWATE	Mercury, Dissolved	0.10	Ð	ug/1	CELP
PC-CG3-MW1-GW4	GROUNDWATE	Nickel, Dissolved	9.00	D	ug/1	CITE
PC-CG3-MW1-GW4	GROUNDWATE	Selenium, Dissolved	1.50	D	ug/1	CIP
PC-CG3-MW1-GW4	GROUNDWATE	Silver, Dissolved	2.00	Þ	ng/1	CITS
PC-CG3-MW1-GW4	GROUNDWATE	Thallium, Dissolved	1.50	B	ug/1	CLP
PC-CG3-MW1-GW4	GROUNDWATE	Zinc, Dissolved	2.00	Þ	1/6n	CILP
PC-CG3-MW1-GW4	GROUNDWATE	Antimony	17.50	Þ	ug/1	SW-846

Data for Background Calculations of Groundwater Alpena CRTC, Alpena, MI

Arsenic
Beryllium
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Selenium
Silver
Thallium
Zinc
Antimony
Arsenic
Beryllium
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Selenium
Silver
Thallium
zinc
Arsenic, Dissolved
Beryllium, Dissolved
Cadmium, Dissolved
Chromium, Dissolved
Copper, Dissolved
Lead, Dissolved
Mercury, Dissolved
Nickel, Dissolved
Selenium, Dissolved

Data for Background Calculations of Groundwater Alpena CRIC, Alpena, MI

SAMPLE ID	MATRIX	ANALYTE	RESULT	QUALIFIER	UNITS	METHOD
PC-TP4-MW1-GW4	GROUNDWATE	Thallium, Dissolved	1.50	B	ug/1	CLP
PC-TF4-MW1-GW4	GROUNDWATE	Zinc, Dissolved	2.00	Þ	ug/1	CLP
D - CWW - CWA	GROUNDWATE	Antimony	17.50	Þ	ug/1	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Arsenic	2.00	Þ	ng/1	CLP
PC SFS-MW2-GW4	GROUNDWATE	Beryllium	0.50	Þ	ng/1	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Cadmium	1.50	Þ	1/6n	CLP
PC-SES-MW2-GW4	GROUNDWATE	Chromium	4.00	Þ	ng/1	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Lead	1.00	Þ	1/6n	CLP
PC-SP5-MW2-GW4	GROUNDWATE	Mercury	0.10	Þ	1/6n	CLEB
PC-SF5-MW2-GW4	GROUNDWATE	Nickel	9.00	Þ	1/6n	GTD
PC-SP5-MW2-GW4	GROUNDWATE	Selenium	1.50	Þ	ug/1	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Silver	2.00	D	ug/1	CLP
PC-875-MW2-GW4	GROUNDWATE	Thallium	1.50	Ħ	ng/1	er e
DC-SPS-MW2-GW4	GROUNDWATE	Antimony	17.50	Þ	ug/1	GIP
F PC-SF5-MW2-GW4	GROUNDWATE	Arsento	2.00	Ħ	ug/1	d to
S PC - SFS - MW2 - GW4	GROUNDWATE	Beryllium	0.50	Þ	ug/1	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Cadmium	1.50	Þ	ug/1	GF.
PC-SF5-MW2-GW4	GROUNDWATE	Chromium	4.00	Þ	ng/1	GT.
PC-SF5-MW2-GW4	GROUNDWATE	Lead	1.00	븀	ug/1	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Mercury	0.10	Þ	ng/1	din.
PC-SF5-MW2-GW4	GROUNDWATE	Nickel	9.00	Þ	ng/1	drip.
DC-2787-1892-1994	GROUNDWATE	Selenium	1.50	DIA	ng/1	CLP
AWD-CAMPA-MWA-DO	GROUNDWATE	Silver	2.00	Þ	1/Bn	CLP
DOLUMENT STATE OF THE STATE OF	GROUNDWATE	Thallium	1.50	B	ug/1	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Antimony, Dissolved	17.50	Þ	1/6n	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Arsenic, Dissolved	2.00	Þ	ng/1	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Beryllium, Dissolved	0.50	Þ	ug/1	CT.P
PC-SF5-MW2-GW4	GROUNDWATE	Cadmium, Dissolved	1.50	Þ	ug/1	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Chromium, Dissolved	4.00	Þ	ug/1	CLP
DC SFS - MW2 - GW4	GROUNDWATE	Copper, Dissolved	2.00	Þ	ug/1	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Lead, Dissolved	1.00	ď	ug/1	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Mercury, Dissolved	0.10	Þ	ng/1	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Nickel, Dissolved	9.00	Þ	ng/1	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Selentum, Dissolved	1.50	Ħ	ug/1	GIT
PC-SF5-MW2-GW4	GROUNDWATE	Silver, Dissolved	2.00	Þ	ug/1	CIP

Data for Background Calculations of Groundwater Alpena CRTC, Alpena, MI

SAMPLE ID	MATRIX	ANALYTE	RESULT	QUALIFIER	UNITS	METHOD
PC-SF5-MW2-GW4	GROUNDWATE	Thallium, Dissolved	1.50	B	ng/1	CLP
PC-HN8-MW1-GW4	GROUNDWATE	Arsenic, Dissolved	2.00	Þ	ng/1	CLP
PC-HN8-MW1-GW4	GROUNDWATE	Beryllium, Dissolved	0.50	Þ	ng/1	CLP
PC-HN8-MW1-GW4	GROUNDWATE	Cadmium, Dissolved	1.50	Þ	ug/1	CIP
PC-HN8-MW1-GW4	GROUNDWATE	Chromium, Dissolved	4.00	Þ	ug/1	CILP
PC-HN8-MW1-GW4	GROUNDWATE	Copper, Dissolved	2.00	Þ	ug/l	CLP
PC-HN8-MW1-GW4	GROUNDWATE	Mercury, Dissolved	0.10	Þ	1/6n	CILP
PC-HN8-MW1-GW4	GROUNDWATE	Mickel, Dissolved	9.00	Þ	ug/1	CILP
PC-HN8-MW1-GW4	GROUNDWATE	Selentum, Dissolved	1.50	Þ	ug/1	CITA
PC-HN8-MW1-GW4	GROUNDWATE	Silver, Dissolved	2.00	Þ	ug/1	CLP
PC-HN8-MW1GW4	GROUNDWATE	Thallium, Dissolved	1.50	B	ug/1	CLP
- PC-HN8-MW1-GW4	GROUNDWATE	Zinc, Dissolved	2.00	Þ	ug/1	CILP
PC-HN8-MWI-GW4	GROUNDWATE	Arsenic	2.00	Þ	ug/1	SW-846
PC-HN8-MW1-GW4	GROUNDWATE	Beryllium	0.50	Þ	ug/1	SW-846
PC-HN8-MW1-GW4	GROUNDWATE	Cachium	1.50	Þ	1/6n	SW-846
PC-HN8-MW1-GW4	GROUNDWATE	Chromium	4.00	Þ	ug/1	SW-846
PC-HN8-MW1-GW4	GROUNDWATE	Copper	2.00	Þ	ng/1	SW-846
PC-HN8-MW1-GW4	GROUNDWATE	Lead	1.00	Þ	ug/1	SW-846
PC-HN8-MW1-GW4	GROUNDWATE	Mercury	0.10	Þ	ug/1	SW-846
PC-HN8-MW1-GW4	GROUNDWATE	Nickel	9.00	Þ	ug/1	SW-846
PC-HN8-MW1-GW4	GROUNDWATE	Selenium	1.50	Ŗ	ng/1	SW-846
PC-HN8-MW1-GW4	GROUNDWATE	Silver	2.00	Þ	1/6n	SW-846
PC-HN8-MW1-GW4	GROUNDWATE	Thallium	1.50	Ę	1/6n	SW-846
PC-HN8-MW1-GW4	GROUNDWATE	Zinc	2.00	Þ	ng/1	SW-846

Appendix N: Analytical Results; Round Three Groundwater and Background Soil Sampling Fixed Base Laboratory Data Summary

Appendix N: Soil Analytical Results Alpena CRTC, Alpena, MI

524-30	QUAL		D	<b>m</b> ¬		×					æ			Ω			=		-	Þ		
SB2 PC-BG1-SB2-SS24-30 10/17/91	RESULT	3730	0.11	130	3.30	0	350	7007	0.10	28.40	, 20	0	0	0.32	٠,	200	17.0	₹ 40	10.90	350		
SS12-18 1	QUAL			ם																Ø		
SB2 PC-BG1-SB2-SS12-18 10/17/91	RESULT	000	90	350		0	70	0	- 0	0	0	0	· c	0	• •	0	0	> <	•	170		
				<b>—</b>		⊃ <b>⊭</b>					<b>2</b>			n		<b>m</b> ;			•	<b>-</b>		
SB2 PC-BG1-SB2-SS06 10/17/91	RESULT	1350 1.70	0 0.13	92	1.70	0.65	420	1100	13.80 0	99.60	38	0	۰ د	0.39	Í	0	0.26	017	13.90	43		
			D	o -	•		Þ				æ		=	<b>&gt;</b>			<b>&gt;</b> ;			æ		
SB1 PC-BG1-SB1-SS24-30 10/17/91	RESULT	2070	0 0.10	340	2.90	00	340	1960	0.89	19.50	23	0	75 50	0.31	•	0	0.21	3 9	3.10	39		
S12-18	QUAL		Þ	<b>D</b>	•		<b>;</b> >				æ			Þ			<b>&gt;</b> :		-	Þ		
SBI PC-BG1-SB1-SS12-18 10/17/91	RESULT	4400	0	350	3.40	00	350	2750	1.50	21	34	0	' 6	0.32	•	0	0.21	25	4 70	350		
	QUAL		1	) <b>)</b> •	-	2	40				Ø	Þ	£	9		8			<b>!</b>	M		
SB1 PC-BG1-SB1-SS06 10/17/91	RESULT	755 1.90	0 0 17	380	1.40	0.58	380	889	3.50	43.20	79	0.93	1 6	1.10		0	0	130	0 0	4		
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	mg/kg mg/kg	mg/kg mo/ks	ug/kg ug/kg	mg/kg mg/kg	mg/kg	ung/kg ug/kg	mg/kg	mg/kg	mg/kg mo/kg	ne/ke	mg/kg	ng/kg	mg/kg mo/kø	mg/kg	mg/kg	mg/kg		mg/kg mm/kg			
<b>ੱ</b>	i e	Aluminum Arsenic	Barium	Butylbenzylphthalate	Calcium Chromium	Cobalt	Copper Diethyl phthalate	Iron	Lead .	Magnesium	Methylene Chloride	Nickel	Pentachlorophenol	Potassium Selenium	Silver	Sodium	Thallium	Total Petroleum Hydrocarbons	Vanadium	bis(2-Ethylhexyl)phthalate		

Appendix N: Soil Analytical Results Alpena CRTC, Alpena, MI

24-30	QUAL	Þ	ם ב	a 🕆		×	Þ			æ		D	Þ	•	<b>2</b>	<b>&gt;</b> =	•	_	Ð
SB4 PC-BG1-SB4-SS24-30 10/17/91	RESULT	1490	0 0.10	၃ ဝ	2.50	0	340 1770	0.70	73.50	15	0	75.60	0.31	• (	200	25.25	0	3.40	340
S12-18	QUAL		:	<b>-</b>		¥	Þ			<b>E</b>		n	Þ	•	<b>a</b>	<b>&gt;</b>	)	-	Þ
SB4 PC-BG1-SB4-SS12-18 10/17/91	RESULT	3790	000	90	4.20	0	340 2740	1.40	14 40	13.40	0	75.90	0.31	, ,	200	25	5.30	3.90	340
										Ø			ם			) D		-	-
SB4 PC-BG1-SB4-SS06 10/17/91	RESULT	1760 0	0 0.11	0	70	0	370 1530	2.30	0 22 20	53	0	· 0	0.33	,	3	25	0	4.60	42
324-30	QUAL		בכ	<b>-</b>		¥	Þ			B			n		=	<b>&gt; &gt;</b>	- Δ	_	Þ
SB3 PC-BG1-SB3-SS24-30 10/17/91	RESULT	2150	0 0.10	<b>?</b> •	2.90	13.30	340 2290	0.96	20.20	17	0	0	0.31	٠,	000	25	0	14.90	340
512-18	QUAL		ם			¥				Ø			n			<b>&gt; &gt;</b>			
SB3 PC-BG1-SB3-SS12-18 10/17/91	RESULT	3610 0	0 0.10	0	3.40	0.80	270 2630	1.50	13.30	32	0	75.90	0.31	, ,	0 21	25	0	3.20	340
908	QUAL		Þ	a ¬		-;	<b>D</b>			Ø			D			ם ס		•	Þ
SB3 PC-BG1-SB3-St 10/17/91	RESULT	4480	0 0.11	90	2.90	0	360 2970	1.50	22.10	32	0	0	0.32	٠.	0 0	25	5.80	4.30	360
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	mg/kg mg/kg	mg/kg mg/kg		mg/kg mg/ke	mg/kg	ug/kg mg/kg	mg/kg mg/kg	mg/kg ms/ke	ug/kg	mg/kg 	ug/kg mg/kg	mg/kg	mg/kg	Sy/Sill Sy/Sill				
		Aluminum Arsenic	Beryllium Butyllium Butylkenzylnhithalate	Calcium	Chromium Cobalt	Copper	Dietnyi pninaiate Iron	Lead	Magnesium Manganese	Methylene Chloride	Nickel Pentachlomohanol	Potassium Potassium	Selenium	Silver	Thalling	Total Petroleum Hydrocarbons	Vanadium	Zinc	bis(2-Ethylhexyl)phthalate

Appendix N: Soil Analytical Results Alpena CRTC, Alpena, MI

9088	QUAL		Ð	M D	<b>A</b>	ם ס	ממ	B	
SB2 PC-SF5-SB2-SS06 10/18/91	RESULT	2590 1.60 0	350 51300 2.80	16.70 350 2360 5.90	8970 60.20 39 0	850 0 0.32 0.32	0 0.21 25 40	40	
348-54	QUAL	Þ	D "	N D	æ	בּ	8#5	n g	·
SB1 PC-SF5-SB1-SS48-54 10/18/91	RESULT	1600 0.54 0	390 0 3.20	0 0 390 1660 11.50	0 14.20 9.60	130	0.22 1400 1400	23.90 110	
	QUAL		a r	Z D	æ	ָם פ	- <b>a</b> p	r O	
SB1 PC-SF5-SB1-SS06 10/18/91	RESULT	3180 1.30 0	120 2190 4.10	0 14.80 380 2580 52.50	525 22.10 20 0	910 0 0.31	1.10 0 0.21 130	43.90 380	
24-30	QUAL	1	D D'	<b>-</b>	) Þ		UL	'n	
SB5 PC-BG1-SB5-SS24-30 10/17/91	RESULT	2210 1.50 0	0.21 0 377 3.60	0 0 0 1980	12.40	257 0.41	- 0 0.31 25	0 14.90 0	
S12-18	QUAL	٦	o o '	-			J n	-	
SB5 PC-BG1-SB5-SS12-18 10/17/91	RESULT	3000	0.21 0 374 3.80	0 0 0 2240	12.50	254 0.41	- 0 0.30 25	0 6.10 0	
5-SS06 11	QUAL	1	D .	<b>b</b>	j =	o	Ω	<b>-</b>	
SB5 PC-BG1-SB5- 10/17/91	RESULT	1850 2.90 24.60	0 2170 2.50	0 0 0 1740	100 0 6	00:	0 0.35 57	0 22.30 0	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	mg/kg mg/kg	Sylon Sylon Sylon Sylon	E A JE B JE B B D B D B D B D B D B D B D B D B D B	mg/kg mg/kg ng/kg ug/kg	mg/kg ug/kg ug/kg		mg/kg mg/kg ug/kg	
COLL		E	Bartlium Beryllium Calcium Chamine	Cobalt Copper Diethyl phthalate Iron	Lead Magnesium Manganese Methylene Chloride	Nickel Pentachlorophenol Potassium Selenium	Silver Sodium Thallium Total Petroleum Hydrocarbons	Vanadium Zinc bis(2-Ethylhexyl)phthalate	

Appendix N: Soil Analytical Results Alpena CRTC, Alpena, MI

	LOCATOR: SAMPLE ID: COLLECTION DATE:	SB2 PC-SF5-SB2-SS48-54 10/18/91	1	SB3 PC-SF5-SB3-SS06 10/18/91		SB3 PC-SF5-SB3-SS48-54 10/18/91	\$548-54 1	SB4 PC-SF5-SB4-SS06 10/18/91		SB4 PC-SF5-SB4-SS48-54 10/18/91	S48-54 1	SB5 PC-SF5-SB5-SS06 10/18/91	5-SS06 51
·	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Aluminum Arsenic Barium	mg/kg mg/kg mg/kg	1230 0.54 0	D	3180 0.50 0.10	7	2090 0.54 0.10	ar ar	2820 0.57 0.10	UL.	1040 0.52 0.10	ď	4820 0 0	
Beryllium Butylbenzylphthalate Calcium Chromium		110 0 3.10	<b>A</b>	350 0 4	ם י	- 40 0 3.20	<b>a</b>	55 0 3.20	<b>8</b> ' '	340 0 6.20	<b>D</b> 7 7	350 753 3.5	Þ o
Cobalt Copper Diethyl phthalate	mg/kg mg/kg ug/kg		×Þ	0.50 0.60 350	n	380	Þ	0.57 4.70 380	n n	0.51 4 340	ם ם	0 0 350	M D
iron Lead Magnesium Manoanese	mg/kg mg/kg mg/kg mg/kg			2180 1.40 3.50		2040 1.20 3.50		1830 3.70 3.50 21.70		1440 0.81 3.50 12.30		9550 1.7 0 13.4	0 0
Methylene Chloride Nickel Pentachlorophenol	erien Sylen Sylen Sylen		<b>8</b> D	31 0.80 840 840	a D	26 26 0.80 930		21.72 30 0.80 930 23	g D	4.70 830 830	<b>m</b> p	. E 0 2 2	# B;
rotassium Selenium Silver Sodium	Algen Balke Balke Balke		D D M	/3 R 0.62	M D M	0.30 0.06 0.66	JDB	7. 0.59 0.68 0	JDE	/3 0.33 0.61	D D M	0.0 0.0	
Thallium Total Petroleum Hydrocarbons Vanadium Zinc bis(2-Ethylhexyl)phthalate	mg/kg drocarbons mg/kg mg/kg mg/kg shalate ug/kg	0.21 26 0 4.60 350		0.21 - 0.60 6.10 350		0.22 - 0.60 28.80 51		0.23 - 0.60 17.50 39		3.90 - 0.60 5.60 340	<b>n</b> p	0.22 25 7.90 4.90 350	

Appendix N: Soil Analytical Results Alpena CRTC, Alpena, MI

\$\$48-54 1	QUAL	Þ	ם ה	MD	Д		- 2 - 2		r D	
SB6 PC-SF5-SB6-SS48-54 10/18/91	RESULT	1050 0.52 0	340 0 2.70 0	340 340 1490 0.88 0	4 0	820 76	0.31 0.63	25.0 0.02	340	
9088	QUAL	D	57	¥ m	М	D	> > #		ם י	
SB6 PC-SF5-SB6-SS06 10/18/91	RESULT	2450 0.52 0	360 1320 3.20 0	0 1200 2020 1.90 657	23.50	870 0	0.31 0.63	0.21 25 0	360	
48-54	QUAL	Ω	D.	-	æ	D	<b>&gt;</b> > #		- <b>a</b>	
SB5 PC-SF5-SB5-SS48-54 10/18/91	RESULT	1810 0.53 0	340 0 2.90 0	0 53 1810 1.20 0	25. 25 25. 80	820 0	0.32	0.21 25 0	11.70	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	mg/kg mg/kg mg/kg	ng kg ng/kg ng/kg ng/kg	mg/kg ug/kg mg/kg mg/kg mg/kg	mg/kg ug/kg	mg/kg ug/kg mg/kg	mg/kg mg/kg mg/kr			
COL		Aluminum Arsenic Bartum	Berylinum Burylbenzylphthalate Calcium Chromium Cobalt	Copper Diethyl phthalate Iron Lead Magnesium	Manganese Methylene Chloride	Nickel Pentachlorophenol Potassium	Selenium Silver	Societii Thallium Total Petroleum Hydrocarbons Vanadiim	Zinc bis(2-Ethylhexyl)phthalate	

Appendix N: Groundwater Analytical Results Alpena CRTC, Alpena, MI

W3	QUAL	<b>m</b>				:	>	D	Þ					-			æ	m	
MW1 33-MW1-GV 10/12/91		_				25.30	n c4	~ ~	<b>.</b>	ı	,		1	. 0			. ~	٧,	
MW1 PC-CG3-MW1-GW3 10/12/91	RESULT	0	' -	50600		52,	n pe	7000	ξ –	•	•	730					•		
'5-GW3	QUAL	<b>#</b>				;	<b>-</b>	ם						-			Ø	Δ	
MW5 PC-MP2-MW5-GW3 10/10/91	RESULT	0	• •	11200		• •	11.5	74 X	3	i	•	730		322000	4	•	' 14	4	
4-GW3	QUAL	æ				;	<b>,</b>							r			Ø	m	
MW4 PC-MP2-MW4-GW3 10/11/91	RESULT	238	1 <del>4-4</del>	54000		• •	. 97 S	4.60	1	•	•	730	•	. 0	•	•	7	6	
3-GW3 1	QUAL	8				1	<b>2</b> -		_					'n			В	Þ	
MW3 PC-MP2-MW3-GW3 10/11/91	RESULT	0	· #	42200	' '	٠.	101	2	43.80	•	ı	730	•	. 0	•	•	' 73	<b>v</b> s	
2-GW3 1	QUAL	æ					<b>2</b> 22							-			Ø	Þ	
MW2 PC-MP2-MW2-GW3 10/11/91	RESULT	0	'	- 00008	1 1	• •	- =	7 %	16.60	1	1	730	•	. 0	•	•	' 14	vo	
1-GW3	QUAL	æ				;	o <b>''</b>	D						-			Ø	<b>D</b>	
MW1 PC-MP2-MW1-GW3 10/11/91	RESULT	0	· =	0808	, '	• •	. II	2	1	1	•	730	•	5950	•	•	. 2	w	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	mg/kg	mg/kg mg/kg	mg/kg ug/kg ms/ka	mg/kg mg/kg	mg/kg	ug/kg mg/kg	mg/kg	mg/kg	ug/kg	mg/kg	ug/kg mg/kg	mg/kg	mg/kg mg/kg			mg/kg mg/kg		
8	<b>\$</b> :	Aluminum	Arsenc Barium	Beryllium Butylbenzylphthalate Calcium	Chromium Cobalt	Copper	Dietnyt phthatate Iron	Lead	Manganese	Methylene Chloride	Nickel	Pentachlorophenol Potassium	Selenium 6:1	Sodium	Thallium	Total Petroleum Hydrocarbons	Zinc	bis(2-Ethylhexyf)phthalate	

Appendix N: Groundwater Analytical Results Alpena CRTC, Alpena, MI

MW1 PC-TF4-MW1-GW3 10/14/91	QUAL	æ				_			<u></u>				<b>D</b>				, ,	,	B B	,	n 1		1 B		
MW1 PC-TF4-MW1 10/14/91	RESULT	0	• ,	-	•	51300	•	. '	-	•	•	7920		- 0		730	<b>`</b>	•	J	j		-	• • •	. •	
76 W6-GW3 /91	QUAL	æ						=	<b>M</b>	=									•				<b>m</b> ;		,
MW6 PC-CG3-MW6-GW3 10/11/91	RESULT	0	•	_	· w	84000	ŧ	' '	> 6	e pa	7	6920	550	•	•	- 6330	1	1	0	•	•	•	7	n	
5 W5-GW3 <sup>19</sup> 1	QUAL	æ			Ω			=	<b>-</b>	· =									_				<b>M</b>	Þ	
MW5 PC-CG3-MW5-GW3 10/11/91	RESULT	0	1	-	יעי	46800	•	• •	יי כ	, <b>m</b>	2	8750	-		•	720	061	•	0	. 1	1	٠	7	\$	
4 V4-GW3 91	QUAL	<b>2</b>						=	<b>~</b>	<b>1</b> =	D								•	•			М	Þ	
MW4 PC-CG3-MW4-GW3 10/11/91	RESULT	o	•	-	. 21	46600	•	1 \	0 6	4 K	7	8760		•	•	' c	130		· c		,	•	7	\$	
3 v3-GW3 91	QUAL	<b>~</b>	ŀ		Ω	1		:	<b>-</b>	<b></b> د	· Þ					•	Δ		-	•			B	ш	
MW3 PC-CG3-MW3-GW3 10/11/91	RESULT	219	'	-	٠ ٧٠	67200	ı	1 \	- ه	293	7	7840	-	1	1	'	06/		' C	<b>,</b> '	•		7	7	
2 V2-GW3 91	QUAL	æ	1		Ω	ı		;	<b>&gt;</b> #	0 60	1		D						-				8	Ø	
MW2 PC-CG3-MW2-GW3 10/12/91	RESULT	c	<b>,</b> 1		· v:	98700	Í	1 1	9 -	1 =	7	12000	-	•	•	' 6	06/	•	14700	7	•	•	7	13	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	*7/***	mg/kg	mg/kg	mg/kg 110/ko	mg/kg	gy/kg	mg/kg	mg/kg /kg	ng/kg me/kg	mg/kg mg/kg	mg/kg	mg/kg	ng/kg	mg/kg	ug/kg	mg/kg T	mg/kg	mg/kg mo/ka	9//em					
			Arsenic	Barium	Beryllium Butylbenzylobithalate	Duty Identity approximate  Calcium	Chromium	Cobalt	Copper	Diethyl phthalate	non Lead	Magnesium	Manganese	Methylene Chloride	Nickel	Pentachlorophenol	Potassium	Selenium 5.:	Silver	Thelling	Total Patroleum Hydrocarhons	Vanadium	Zinc	bis(2-Ethylhexyl)phthalate	• • •

Appendix N: Groundwater Analytical Results Alpena CRTC, Alpena, MI

8	LOCATOR: SAMPLE ID: COLLECTION DATE:	MW2 PC-TF4-MW2-GW3 10/14/91	2-GW3 11	MW3 PC-TF4-MW3-GW3 10/14/91	3-GW3	MW4 PC-TF4-MW4-GW3 10/14/91	4-GW3	MW1 PC-SF5-MW1-GW3 10/15/91	-GW3	MW2 PC-SF5-MW2-GW3 10/15/91	2-GW3	MW3 PC-SF5-MW3-GW3 10/15/91	3-GW3 1
Ŷ.	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Aluminum	mg/kg	0	æ	0	æ	0	æ	64	ê	110	<b>@</b> =	91.70	<u>e</u>
Sarium Barium	mg/kg mg/kg	٠		٠ ــ		•		34.40	0	. O	0	9.30	
Beryllium	mg/kg	•		1		•		1	•	•	•	•	
Butylbenzylphthalate Calcium	ug/kg ma/ka	- 00800		76500		\$6400		128000		15700		17800	
Chromium	mg/kg	, ,		'		) )		'		'		,	
Cobalt	mg/kg	•		•		•				•		1	
Copper	mg/kg	•		•		•				į		1	
Diethyl phthalate	ng/kg	5	D	01	æ	s.	D	15	<b>2</b>	2		e	æ
Iron	mg/kg	11		11		11		9640		21.7	0	27.10	
Lead	mg/kg	•		•		•		2.20	€	7		7	_
Magnesium	mg/kg	35	n	9870		8910		11800		13300		11300	
Manganese	mg/kg	-		1		_	D	519		2.3(	0		Þ
Methylene Chloride	ug/kg	•		•		•		•		•		•	
Nickel	mg/kg	œ	m	œ	Þ	<b>∞</b>	Þ	•		•		•	
Pentachlorophenol	ng/kg			•		•		20	D	2	ם	-	-
Potassium	mg/kg	730		730		730		2940	0	3510	0	4740	0
Selenium	mg/kg	•		•		•		•		•		•	
Silver	mg/kg			•		•		•		•		•	
Sodium	mg/kg	0	-	0		0	<b>-</b>	1530	<b>@</b>	8080	6	1850	æ
Thallium		•		•		•		•		•		1	
Total Petroleum Hydrocarbons			D		ם	1.90	0	1.60		-	n	_	Þ
Vanadium	mg/kg	•		•		•		7.60	0	9	Þ	ø	Þ
Zinc		7	M	7	Ø	7	Д	5.30	æ	11.2	<b>B</b>	4.9	<b>e</b>
bis(2-Ethylhexyl)phthalate		က	Ø	4	8	9	<b>B</b>	7	æ	-	<b>m</b>	ν,	Þ

Appendix N: Groundwater Analytical Results Alpena CRTC, Alpena, MI

GW3	QUAL	Ø	Ø	Þ					ω;		i	•			æ		6	۵				-	
MW2 PC-HN8-MW2-GW3 10/14/91	RESULT	123	5.80	י אי	64300		9	S	16.30	270	83#C	<b>-</b> '		٠	1690	•	' 0307	000		, ,	30.30	4	
GW3	QUAL	æ	æ	-	•				<b>m</b> ;		=	>			20		£	20			æ	ב	•
MW1 PC-HN8-MW1-GW3 10/12/91	RESULT	83.10	19.20	' 2	00669		14.90	0.80	18.60	2 000	9870	-			4570	•		9090		•	'vo	•	1
-GW3	QUAL	Ø							Ø								٠	-			60	, pc	1
MW3 PC-LF6-MW3-GW3 10/14/91	RESULT	0	' -		53400	1		•	==	3.10	14600	43.30			730	1	1 (	0	1	•	. 2	<u>~</u>	2
-GW3	QUAL	æ							Ø								1	_			æ	2 4	<b>a</b>
MW2 PC-LF6-MW2-GW3 10/15/91	RESULT	0	0	1 4	20500	•	•		0	0	15000	23.60	• 1		0	•	1	7450	•	•	٠ ح	· "	1
I-GW3 1	QUAL	B							Ø	ΩΓ								-			0	2 0	q
MW1 PC-LF6-MW1-GW3 10/15/91	RESULT	0	'	•	37000	ı	•		11	7	11200	-	1		730	1	•	0889	•	•	, (	4 <u>5</u>	1
-GW3	QUAL	<u>e</u>	<b>&gt;</b> 0						0	_		0		1	o	>		6	;	<b>D</b>	Þé	-	
MW4 PC-SF5-MW4- 10/15/91	RESULT	101	8.50		33900	•	•	l ve	27.10	7	7970	4.30	•	۰ ۶	3690	'	•	4720		-	9	9.TO	7
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	mg/kg	mg/kg mg/kg	mg/kg	ug/kg mg/kg	mg/kg	mg/kg	mg/kg /ke	ng/kg	mg/kg	mg/kg	mg/kg	ug/kg	mg/kg	84/8m	mg/kg	mg/kg	mg/kg			mg/kg	ay.Ka	ug/kg
COLLI		Aluminum	Arsenic Barium	Beryllium	Butylbenzylphthalate Calcium	Chromium	Cobalt	Copper District abstracts	Dieury) pinnaiae Iron	Lead	Magnesium	Manganese	Methylene Chloride	Nickel	Pentachiorophenoi	rotassium Selenium	Silver	Sodium	Thallium	Total Petroleum Hydrocarbons	Vanadium	Zinc	bis(2-Elnylnexyl)phthalate

Appendix N: Groundwater Analytical Results Alpena CRTC, Alpena, MI

:W3	QUAL	B						D		æ									-				æ	æ	
MW3 PC-RT9-MW3-GW3 10/13/91	result qu	0	٠ ــ		71800		9	s		7	7950	-		•		730		•	0	•	•	•	7		
-GW3	QUAL	M					Þ	Þ	-	D		ם							-				Ø	m	
MW2 PC-RT9-MW2-GW3 10/13/91	RESULT	0	1 <del></del>		77100		9	S	=	7	11300	-	•	•	•	730	1	•	0		•	•	7	7	
1-GW3 1	QUAL	æ						_	~	<b>A</b>		D											Д	M	
MW1 PC-RT9-MW1-GW3 10/12/91	RESULT	0	٠		71900		9	***	~	7	0996	-	•	•	•	5150	•	•	0	Ī	•	•	7	w	
-GW3	QUAL	æ	<b>A</b>	D					8			D											8		
MW5 PC-HN8-MW5-GW3 10/14/91	RESULT	76.70	26.80	۰ ۰	136000		12.70	5	18.60	2.80	16900	-	ì	•	•	7500	•	•	64800	•	•	•	4.80	9	
-GW3	QUAL	Ø	æ	Ω			Ø	-	Ω	n		<b>m</b>				<b>2</b>			æ				m	-	
MW4 PC-HN8-MW4-GW3 10/14/91	RESULT	91.10	6.40	ı vo	42900	, (	11.10	4	11	7	6030	1.30	•	•	1	1790	•	•	3020	•	•	•	5.90	m	
3-GW3	QUAL	Д	B	ם			Ω	D	D	Ω		Ø											m		
MW3 PC-HN8-MW3-GW 10/14/91	RESULT	118	73	יאי	126000		9	S	==	7	16000	-	•	٠	•	0909	•		61300	•	٠	•	19.40	ဗ	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	mg/kg	mg/kg mg/kg	mg/kg ug/kg	mg/kg	mg/kg ma/ka	mg/kg	ng/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/kg	mg/kg	ng/kg	mg/kg	mg/kg	mg/kg	mg/kg			mg/kg	7	ite ug/kg	
00		Aluminum	Rarium Barium B	Butylbenzylphthalate	Calcium	Chromium	Coppet	Diethyl phthalate	Iron	Lead	Magnesium	Manganese	Methylene Chloride	Nickel	Pentachiorophenoi	Potassium	Selenium	Silver	Sodium	Thallium	Total Petroleum Hydrocarbons	Vanadium	Zinc	bis(2-Ethylhexyl)phthalate	

## Appendix N: Groundwater Analytical Results Alpena CRTC, Alpena, MI

<b>v</b> 3	ΨΓ		
MW5 PC-RT9-MW5-GW3 10/13/91	RESULT QUAL	83500 83500 1 1 1 1 1 1 1 1 1 1 1 1 1	
	QUAL	B B B B B B B B B B B B B B B B B B B	
MW4 PC-RT9-MW4-GW3 10/13/91	RESULT	0 1 1 1 1 5 8 8 8 8 8 7 30 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
LOCATOR: SAMPLE ID: TION DATE:	UNITS:	mg/s ng/s ng/s ng/s ng/s ng/s ng/s ng/s n	
LOCATOR: SAMPLE ID: COLLECTION DATE:		ursenic karium keyllium suylbenzylphthalate Salcium Shromium Sobalt Cand Magnesium Manganese Methylene Chloride Nickel Pentachlorophenol Potassium Selenium Silver Sodium Thallium Total Petroleum Hydrocarbons Vanadium Silver Sodium	
		Aluminum Arsenic Barium Beryllium Beryllium Calcium Cobalt Coppet Diethyl phhalate Iron Lead Magnesium Manganese Methylene Chloride Nickel Pentachlorophenol Potassium Selenium Selenium Silver Sodium Thallium Total Petroleum Hys Vanadium Zinc Silver Sodium Thallium Total Petroleum Hys Vanadium Zinc	

Appendix O: Analytical Results; SI Fixed Base Laboratory Data Summary

Appendix O: Soil Analytical Results Alpena CRTC, Alpena, MI

Control   Cont											
COLLECTION DATE:		-SS2-10 7	QUAL	S S	8888						
COLLECTION DATE:	MAN	PC-CG3-MW1 09/22/8	RESULT	00	0000	1	0.70 0.21 0.560 5.60 1.90	3.3 0.4 0.20	11		
COLLECTION DATE:		SS1-2.5	QUAL	88	2222						
COLLECTION DATE:	MAN	PC-CG3-MW1- 09/20/8	RESULT	00	0000	•	0.15 0.08 0.08 3.80 1.80	3.10 1.50 4.20	10	•	
COLLECTION DATE:			QUAL	N O	8888						
COCATOR:	100	SE1 PC-MP2-SB1-8 10/04/87		00	0000	1	0.37 0.11 0 3.30 2	2.70 0 6.60	14		
COLLECTIOR:		SS1-5	QUAL	S S	2222						
LOCATOR: MW1  SAMPLE ID: PC-MP2-MW1-SS  COLLECTION DATE: 09/18/87  UNITS: RESULT QU  Ug/kg 0	103	SB1 PC-MP2-SB1- 10/04/87		0 0	0000	1	0.72 0.09 0 4.70 1.40	4.30 0 4.30	8.20		
LOCATOR: MW1  SAMPLE ID: PC-MP2-MW1-SS  COLLECTION DATE: 09/18/87  UNITS: RESULT QU  Ug/kg 0		SS2-10	QUAL	88	2222		QN QN				
LOCATOR: MW1  SAMPLE ID: PC-MP2-MW1-SS  COLLECTION DATE: 09/18/87  UNITS: RESULT QU  Ug/kg 0	12107	MW1 PC-MP2-MW1- 09/18/87		00	0000	ı	0.43 0.15 0 5.50 0.97	2.70 2.70 0.13 6.90	140		
LOCATOR: MW1  SAMPLE ID: PC-MP2-MW1  COLLECTION DATE: 09/18/8  UB/Kg 0  UB/		381-2.5	QUAL	S S	5555		8 8	Q.			
COLLEC d	,,,,,,	MW1 C-MP2-MW1-4 09/18/87		00	0000	•	2.40 0.08 0 3.60 0	2.60	4		
	1011	LOCATOR: SAMPLE ID: P LECTION DATE:	UNITS:	ng/kg ug/kg	ng/kg ug/kg g/kg g/kg ug/kg		18/8 18/8 18/8 18/8 18/8 18/8 18/8 18/8	ng/gu ng/kg ng/kg			
		COL		8010 Tetrachloroethylene Vinyl chloride	8020 Benzene Ethylbenzene Toluene Xylenes (TOTAL)	625 bis(2-Ethylhexyl)phthalate	CLP METALS Arsenic, Dissolved Beryllium, Dissolved Cadmium, Dissolved Chromium, Dissolved Copper, Dissolved	Leau, Dissolved Nickel, Dissolved Selenium, Dissolved Zinc, Dissolved	TPH Total Petroleum Hydrocar		

Appendix O: Soil Analytical Results Alpena CRTC, Alpena, MI

						_	
SS2-10 7	QUAL	88	2222	3	Ž	8	
SB2 PC-CG3-SB2-SS2-10 10/04/87	RESULT	00	0000	, '	0.35 0.05 0 1.50 2.10	0.60 2.30 0.39 3.90	35
SS1-5	QUAL	S S	2222	2	8 8	ď	
SB2 PC-CG3-SB2-SS1-5 10/04/87	RESULT	00	0000	,	0 0.14 0 3.20 4.90	0.76 3.10 0 9.20	12
SS2-10	QUAL	S S	2222	2	S Q	N O	
SB10 PC-CG3-SB10-SS2-10 10/04/87	RESULT	00	0000	,	1 0.08 3.80 1.40	2.40 2.80 0 9.30	22
	QUAL	8 8 8	2229	<u> </u>	N Q	QN	
SB10 PC-CG3-SB10-SS1-5 10/04/87	RESULT	00	0000	,	0.43 0.08 0 2.20 0.97	1 2 0 3.70	8.30
SS1-5	QUAL	22	2222	2	N Q	Ö	Q.
SB1 PC-CG3-SB1-SS1-5 10/04/87	RESULT	00	0000	•	0.88 0.08 0.08 3.80 3.60	1.20 3.30 0 5.30	0
0	QUAL	Ä	2229	È	N ON	Ŋ	
SB1 PC-CG3-SB1-SS1-1 10/04/87	RESULT	0 %	0000	· '	0.57 0.04 0 1.60 2.20	0.59 2 0 4.10	35
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	ug/kg ug/kg	ug/kg ug/kg ug/kg	ug'ng halate mg/kg	mg/kg I mg/kg I mg/kg Mg/kg		frocarbons mg/kg
		8010 Tetrachloroethylene Vinyl chloride	Berzene Ethylberzene Toluene	625 bis(2-Ethythexyl)phthalate	CLP METALS Arsenic, Dissolved Berylium, Dissolved Cadmium, Dissolved Chromium, Dissolved Chromium, Dissolved Copper, Dissolved	Lead, Dissolved Nickel, Dissolved Selenium, Dissolved Zinc, Dissolved	TPH Total Petroleum Hydrocarboms

Appendix O: Soil Analytical Results Alpena CRTC, Alpena, MI

0	٦	22	2222	S ·	<del>S</del>			
-SS2-1 17	QUAL	ZZ	ZZZZ					
SB5 PC-CG3-SB5-SS2-10 10/04/87	RESULT	00	0000 '	0.67 0.04 0.94 0.94	1.5. 13. 13.	13		
-SS1-5 7	QUAL	8 8 8	2222	8	g			
SB5 PC-CG3-SB5-SS1-5 10/04/87	RESULT	00	0000 1	0.46 0.07 0.07 0.03 0.03	2.10 2.10 0 4.10	12	•	
52-10	QUAL	S S	5555	QN Q	<b>Q</b>			
SB4 PC-CG3-SB4-SS2-10 10/03/87	RESULT	00	0000	0.53 0.06 0.06 1.90	1.10 2.40 0 5.70	16		
SS1-5	QUAL	88	2222	ď	Ä			
SB4 PC-CG3-SB4-SS1-5 10/03/87	RESULT	00	0000	0.47 0.07 0 1.40	0.94 2.10 0 3.70	12		
\$\$2-10	QUAL	88	2222	QX Qx	<b>B</b>			
SB3 PC-CG3-SB3-SS2-10 10/04/87	RESULT	00	0000 '	0.59 0.06 0 1.50	13 2.20 0 4.30	8.20		
SS1-5	QUAL	88	8888	QX QX	Q.			
SB3 PC-CG3-SB3-SS; 10/04/87	RESULT	00	0000 '	0.64 0.09 2.60	1 2.70 0 4.60	12		
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	ug/kg ug/kg	UG/KG UG/KG UG/KG UG/KG	ng/kg ng/kg ng/kg ng/kg ng/kg	mg/kg mg/kg mg/kg mg/kg	ns mg/kg		
COLLE		8010 Tetrachloroethylene Vinyl chloride	8020 Benzene Ethylbenzene Toluene Xylenes (TOTAL) 625	CLP METALS Arsenic, Dissolved Beryllium, Dissolved Cadmium, Dissolved Chromium, Dissolved Chromium, Dissolved	Lead, Dissolved Nickel, Dissolved Selemium, Dissolved Zinc, Dissolved	TPH Total Petroleum Hydrocarbons		

Appendix O: Soil Analytical Results Alpena CRTC, Alpena, MI

SB8 PC-CG3-SB8-SS2-15 10/04/87	LT QUAL				ON OF	21	560				0.29		ON O	1.80	1.30 0.04	1.90	ON O	2.60		4600	
	L RESULT	1	<u> </u>		ON SE								S S				S S			4	
SB8 PC-CG3-SB8-SS1-5 10/04/87	RESULT QUAL		z z		00				ı		0.58	0.10		2.90	1.20	2.60		v.		<b>5</b> 6	•
	QUAL	;	<u>2</u> 2		2	2 2	S				0		QN Q	0 (	o vo	. 0	ND	0			
SB7 PC-CG3-SB7-SS2-5 10/03/87	RESULT	•	00		0	0	0		1		8.0	0.00	0	2.5	3.5	2.3	0	4.10		12	
r-SS1-2 17	QUAL		2		2	2 2	2						Q.	0 4	o ••	. 0	£	0			
SB7 PC-CG3-SB7-SS1-2 10/03/87	RESULT	•	7.20		00		0		1		-	0.1	0	2.5	7.90 0.93	2.4	0	3.30		12	
.7	QUAL	!	2 2		2	2 2	S				_		Q.	_	_		S				
SB6 PC-CG3-SB6-SS2-15 10/03/87	RESULT	,	00		0	0	0		•		0.5(	90.0	0	2.3(	3 0 50	1.80	0	3.70		13	
SS1-10 7	QUAL		22		<u>8</u>	2 2	Z						S				QN.				
SB6 PC-CG3-SB6-SS1-10 10/03/87	RESULT	•	00		0	0	0		•		0.56	0.05	0	1.80	0.80	1.90	0	4.70		12	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:		ng/kg ug/kg		ug/kg	ng/kg no/ko	gy/gu ug/kg		ite mg/kg		mg/kg	mg/kg	gy/gm	mg/kg	mg/kg mo/ko	ay/au mg/kg	mg/kg	mg/kg		arbons mg/kg	
90		8010	Tetrachloroethylene Vinyl chloride	8020	Benzene	Emylbenzene Toluene	Xylenes (TOTAL)	625	bis(2-Ethylhexyl)phthalate	CIDVETAIS	Arsenic. Dissolved	Beryllium, Dissolved	Cadmium, Dissolved	Chromium, Dissolved	Copper, Dissolved	Nickel, Dissolved	Seferium, Dissolved	Zinc, Dissolved	ТРН	Total Petroleum Hydrocarbons	

Appendix O: Soil Analytical Results Alpena CRTC, Alpena, MI

5-16.5	QUAL							
SB1 PC-TF4-SB1-SS1-2-6.5 PC-TF4-SB1-SS2-15-16.5 09/30/87 09/30/87	RESULT QU			•			•	
1-2-6.5 PC-	QUAL	22				Ä		
SB1 PC-TF4-SB1-SS 09/30/87	RESULT	00	230 200 500 870	•	0.79 0.30 0.10 8.60 2.60	0.5 0 17	3700	-
	QUAL	8 8 0	8888		QN ,			
MW1 PC-TF4-MW1-SS2-10 09/18/87	RESULT	00	0000	ı	0.36 0.05 0.05 4.50	2.80 2.80 0.31 5.60	26	
-SS1-5	QUAL	8 8 8	2222		QN			
MW1 PC-TF4-MW1-SS1-5 09/18/87	RESULT	00	0000	t	0.51 0.03 0.90 0.85	0.20 1.60 0.40 6.20	10	
52-10	QUAL	8 8 8	5555			2 2		
SB9 PC-CG3-SB9-SS2-10 10/04/87	RESULT	00	0000	•	1.20 0.12 0 6.20 1.80	4.60 0.60	8.30	
SS1-5	QUAL	2 Z	5555		N O	Š		
SB9 PC-CG3-SB9-SS1-5 10/04/87	RESULT	00	0000	•	0.60 0.05 0 1.50	0.83 0 6.20	13	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	ug/kg ug/kg	ug/kg ug/kg ug/kg ug/kg	mg/kg	mg/kg mg/kg mg/kg mg/kg mg/kg	mg/kg mg/kg mg/kg mg/kg	S//Sur	
COLLEC		8010 Tetrachloroethylene Vinyl chloride	8020 Benzene Ehrybenzene Toluene Xylenes (TOTAL)	625 bis(2-Ethylhexyl)phthalate	CLP METALS Arsenic, Dissolved Beryllium, Dissolved Cadmium, Dissolved Chromium, Dissolved Copper, Dissolved	Lead, Dissolved Nickel, Dissolved Selentum, Dissolved Zinc, Dissolved	TPH Total Petroleum Hydrocarbons	

Appendix O: Soil Analytical Results Alpena CRTC, Alpena, MI

	1-6.5	QUAL	22	22	Q			N Q		!	Q N		
SB4	4-SB4-SS1-1 09/30/87		00	00	o <u>o</u>	•	0.95	0 2 50	4.6 6.40	3.60	o =	410	
v	PC-TF4-SI 09/	RESULT			0 280						-	14	
	2-5-6.5	QUAL	22	22	25			Ä			Ž		
SB3	SAMPLE ID:PC-TF4-SB1-SS3-25-26.5 PC-TF4-SB2-SS1-1.5-3 PC-TF4-SB2-SS2-5-6.5 PC-TF4-SB3-SS1-1.5-3.0 PC-TF4-SB3-SS2-5-6.5 PC-TF4-SB4-SS1-1-6.5 TION DATE: 09/30/87 09/22/87 09/32/87 09/30/87 09/30/87	RESULT	00	000	00	ı	1.20	3.60	1.50	2.70	0 4.60	220	•
	SS1-1.5-3.0 /87	QUAL											
SB3	*C-TF4-SB3-8	RESULT			• •	•	1 1	1 1	1 1	•		•	
,	2-5-6.5 1	QUAL	88	22	2 2			Ä			Q N		
SB2	PC-TF4-SB2-SS 09/22/87	RESULT	00	000	00	i	0.13	0 5.40	1.20	2.70	0 4.4	54	
	-1.5-3	QUAL	S S	Q !	Q N			Ν		!	Q Z		
SB2	C-TF4-SB2-SS1 09/22/87	RESULT C	00	0 8.20	52 0	ı	0.96	0 6	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	4.60	0 77	200	
,	S3-25-26.5 P 87	QUAL											
SB1	C-TF4-SB1-S 09/30/	RESULT	, ,			•		1 1		•	• •	'	
LOCATOR:	SAMPLE ID:P COLLECTION DATE:	UNITS:	ug/kg ug/kg	ug/kg ug/kg	ug/kg ug/kg	ByBu	mg/kg me/ke	mg/kg mg/kg	mg/kg me/ko	mg/kg	mg/kg mg/kg	ions mg/kg	
	COLL		8010 Tetrachloroethylene Vinyl chloride	8020 Benzene Ethylbenzene	I oluene Xylenes (TOTAL)	625 bis(2-Ethylhexyl)phthalate	CLP METALS Arsenic, Dissolved Beryllium, Dissolved	Cadmium, Dissolved Chromium, Dissolved	Copper, Dissolved Lead, Dissolved	Nickel, Dissolved	Selemum, Dissolved Zinc, Dissolved	TPH Total Petroleum Hydrocarbons	

Appendix O: Soil Analytical Results Alpena CRTC, Alpena, MI

COEFFCIION DAIE:	SAMPLE ID:PC-TF4-SB4-SS2-15-16.5 PC-TF4-SB5-SS1-0-4 TION DATE: 09/30/87 11/13/87	S2-15-16.5 87	PC-TF4-SB5-SS 11/13/87	SS1-0-4	PC-SF5-MW1-SS1-2.5 09/16/87		PC-SF5-MW1-SS2-10 09/16/87	-SS2-10	DC-SF5-SB1-SS: 09/21/87	S1-2-3.5 7	SB1 SB1 PC-SF5-SB1-SS1-2-3.5 PC-SF5-SB1-SS2-4-5.5 09/21/87 09/21/87	\$24-5.5 7
UNITS:	: RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010 Tetrachloroethylene ug/kg Vinyl chloride ug/kg	I I .		00	88	00	8 8 8	00	88	00	<u>8</u> 8	00	88
ng/kg ng/kg ng/kg	t t t t		0000	2222	0000	2222	37	888	0 0 0 5.80	222	0 380 180 2000	<b>Q</b>
625 bis(2-Ethylhexyl)phthalate mg/kg			0	Š	•		1		•		•	
CLP METALS Arsenic, Dissolved mg/kg Beryllium, Dissolved mg/kg Cadmium, Dissolved mg/kg Chromium, Dissolved mg/kg	1 1 1 1		0.53 0.08 0 2.60	g Z	0.32 0.26 0 6.10	Ž Ž	0.67 0.31 0 4.50	S S	0.20 0.50 0	N N	6.80 0.31 0.99	Š
mg/kg mg/kg mg/kg mg/kg			1 1 2.10 0 3.90	g S	2 7.70 3 0.23 5.60	0	6.20 5.50 6.30 0.19		3.10 7 6 0.63 8.50		5.80 2.80 6.40 0.10	
TPH Total Petroleum Hydrocarbons mg/kg	i		0	N	28		<b>18</b>		130		83	
									•			

Appendix O: Soil Analytical Results Alpena CRTC, Alpena, MI

\$-685		QUAL	ļ	25		Q!	2 5	9		QN				S								
SB4 PC-SE5-SB4-SS2-5	10/19/87	RESULT	,	00		0	00	0		0		76.0	0.07	0	2.70	0.60	0.79	0.70	2.70		01	:
2-183		QUAL	!	25		2	2 5	Ş		S				Š		Ş						
SB4 PC-SE5SB4-SS1-2	10/19/87	RESULT	•	00		0	00	0		0		1,00	0.11	0	3.90	0.	5.7	1.70	4		<u> </u>	•
2455		QUAL	ļ	25		2	2 2	2		,				Š				Š				
SB3 PC-SF5-SR3-SS	09/21/87	RESULT	•	00		0	<b>o</b> c	0		ı		80 0	0.08	0	2.50	1.10	07.1	S:-1 C	2.80		75	
1-2-3 \$		QUAL		25		Q!	2 2	2						Q.				Z	)			
SB3 PC-SF5-SR3-SS	09/21/87	RESULT	,	00		0	00	0		,		0.43	0.27	0	6.30	1.30	3.70	n C	5.10		76	
245.5		QUAL	!	25		N								ΩN								
SB2 PC-SF5-SR2-SS	09/21/87 09/21/87 09/21/87	RESULT	,	00		0	0.120	1700		1		1 10	0.37	0	11	5.60	05.4	0.12	9.80		580	
-2-3.5		QUAL	;	22		2	2 5	SS						Ω				QX	)			
SB2 C-SF5-SR2-SS	09/21/87	RESULT	•	00		0	00	0		•		0.01	0.50	0	12	5.20	9.20	0.70	· =		=	
LOCATOR: SB2 SAMPLE ID: PC-SF5-SR2-SS1-2.	COLLECTION DATE:	UNITS:	3	ng/kg ug/kg		ng/kg	ng/kg /va	ga/gn ng/kg		mg/kg		24/8· <b>m</b>	mg/kg mg/kg	mg/kg	mg/kg	mg/kg	37/SW	mg/kg mg/kg	gy/gm		ons mv/ko	
	COLL		8010	l etrachloroethylene Vinyl chloride	8020	Benzene	Ethylbenzene	Xylenes (TOTAL)	675	bis(2-Ethylhexyl)phthalate	STATE OF STATE	CLF MEIALS Argenic Dissolved	Beryllium, Dissolved	Cadmium, Dissolved	Chromium, Dissolved	Copper, Dissolved	Lead, Dissolved	Selentum, Dissolved	Zinc, Dissolved	ТРН	Total Petroleum Hydrocarbons	•

Appendix O: Soil Analytical Results Alpena CRTC, Alpena, MI

1	AL.	99	2222	Š		<u>R</u>		!	2		
1 1-SS1-C 187	QUAL	<b>*</b>	m #1 #1 #1	~	2 %		3				
SB3 PC-LF6-SB3-SS1-0-4 11/13/87	RESULT	00	0000	0	0.92	0	17	31 7.4.	S &	55	
\$\$1-0-5 7	QUAL	S S	5555	Š		N Q	Ą		Ž		
SB2 PC-LF6-SB2-SS1-0-5 11/13/87	RESULT	00	0000	0	1.20	0	0.00	0.50 2.70	<b>&gt;</b> m	20	-
SS2-5	QUAL	S S	2222	N Q		ΩŽ					
SB1 PC-LF6-SB1-SS2-5 10/19/87	RESULT	00	0000	0	0.90	0	0.66	1.80	3.80	19	
SS1-2	QUAL	N ON	2222	N Q		QN					
SB1 PC-LF6-SB1-SS1-2 10/19/87	RESULT	00	0000	0	0.90	0	1.40	1.60	9 15	9	
SS2-10	QUAL	8 8 0	8888	S S		Z					
MW1 PC-LF6-MW1-SS2-10 09/17/87	RESULT	00	0000	0	1.50	0	1.30	5.30	3.90	24	
	QUAL	22	8888			Ω̈́					
MW1 C-LF6-MW1-S 09/17/87	RESULT	00	0000	1.60	1.30	0	0.78	2.40 2.40	3.10	21	
LOCATOR: MW1 SAMPLE ID: PC-LF6-MW1-SS1-2.5 COLLECTION DATE: 09/17/87	UNITS:	ug/kg ug/kg	ay in ag kg ag kg ag kg ag kg	mg/kg	mg/kg mg/kg	mg/kg	mg/kg mg/kg	mg/kg mg/kg	mg/kg mg/kg	ns mg/kg	
COLLE		ylene	ΑĽ)	yl)phthalate	lved solved	solved	Skolved Ived	pa,	solved d	TPH Total Petroleum Hydrocarbons	
		8010 Tetrachioroethylene Vinyl chloride	8020 Benzene Ethylbenzene Toluene Xylenes (TOTAL)	625 bis(2-Ethylhexyl)phthalate	CLP METALS Arsenic, Dissolved Beryllium, Dissolved	Cadmium, Dissolved	Copper, Dissolved	Lead, Dissolved Nickel, Dissolved	Selenium, Dissolved Zinc, Dissolved	TPH Total Petroleur	

Appendix O: Soil Analytical Results Alpena CRTC, Alpena, MI

[00	LOCATOR: SAMPLE ID: COLLECTION DATE:	SB4 PC-LF6-SB4-SS1-0-5 11/13/87	-SS1-0-5 87	SB5 PC-LF6-SB5-SS1-0-2 11/13/87	SS1-0-2 17	SB6 PC-LF6-SB6-SS1-8-9 11/13/87		SB1 SB1 SB1 PC-FF7-SB1-SS1-1-2.5 PC-FF7-SB1-SS2-5-6.5 PC-FF7-SB2-SS1-1-2.5 09/21/87 09/21/87	\$1-1-2.5	SB1 PC-FF7-SB1-SS; 09/21/87	\$2-5-6.5 7	SB2 PC-FF7-SB2-SS 09/21/87	\$\$1-1-2.5 \$7	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	
8010 Tetrachloroethylene Vinyl chloride	ug/kg ug/kg	00	22	00	S S	00	Q Q	00	8 S	00	22	00	88	
8020 Berzene Ethylherzene	ug/kg 110/kg		O S	00	25	00	Z Z	00	88	00	2 5	00	S S	
Toluene Xylenes (TOTAL)	gygn ng/kg ng/kg	000	222	000	222	000	222	000	222	000	222	000	222	
625 bis(2-Ethylhexyl)phthalate	e mg/kg	0	Q.	0	<u>8</u>	0	Q.	0	Š	0	Q.	0	Z	
CLP METALS Arsenic, Dissolved	mg/kg		<b>9</b>	4.10	0.	1.50	0.	1.80	_	0.12		0.3	<b>*</b>	
Beryllium, Dissolved Cadmium, Dissolved Chromium, Dissolved Copper, Dissolved	mg/kg mg/kg mg/kg mg/kg		ON OI	0.31 0 9.90 4.50	<u>Q</u>	0.36 0 10.40 2.70	a a	0.25 0 5.10 0.91	8	0.29 10 14.40	8	0.23 0 5.30 1.50		_
Lend, Dissolved Nickel, Dissolved Selenium, Dissolved Zinc, Dissolved	mg/kg mg/kg mg/kg	0.21 1.80 0 2.90	0 QX	40 2.80 30	QN C	4.60 5.30 0 12	Q Q	4.30 2.60 0.55 3.60		3.40 5.50 0 11	g .	8 2.3 8.1.	QX 0	_
TPH Total Petroleum Hydrocarbons	rrbons mg/kg	0	Ä	45		0	QN QN	5.10		31		20		
										•				
		200000000000000000000000000000000000000												

Appendix O: Soil Analytical Results Alpena CRTC, Alpena, MI

ξ	LOCATOR: SAMPLE ID:	SB2 PC-FF7-SB2-SS;	\$\$2-5-6.5	SB3 PC-FF7-SB3-S	\$14-5.5	SB3 PC-FF7-SB3-SS,	\$52-8-9.5	LOCATOR: SB2 SB3 SB3 SB4	S1-0.5-2 P	SB4 C-FF7-SB4-SS	22-10-11.5P	MW1 C-HN8-MW1-	-SS1-2.5-5
3	COLLECTION DATE:	RESULT	oval.	RESULT	QUAL	RESULT	oual	RESULT	QUAL	RESULT	QUAL	RESULT	oual.
8010 Tetrachloroethylene Vinyl chloride	ug/kg ug/kg	00	N N	00	88	00	S S	00	S S			00	88
8020 Benzene Ethylbenzene	ug/kg ug/kg	00	22	00	22	00	22	00	22			00	88
Toluene Xylenes (TOTAL)	ng/kg ng/kg	00	22	00	22	00	22	00	22			00	25
625 bis(2-Ethylhexyl)phthalate	te ng/kg	0	QX	0	S C	0	QN	•		•		•	
CLP METALS Arsenic, Dissolved Beryllium, Dissolved	mg/kg mo/ko	1.80	0 11	1.40	0.0	0.0	m vc	0.16				1.30	0 10
Cadmium, Dissolved Chromium, Dissolved	mg/kg ms/ke	0 %	Q Z	0 4	ð.	0 2.90	QX C	0 6.30	Q Z	1 1		0 =	QN QN
Copper, Dissolved Lead, Dissolved	mg/kg mg/kg	2.50	. 0	1.30		0.83		5.40		• •		1.50	
Nickel, Dissolved Selenium, Dissolved	mg/kg mg/kg	e 0	S	2.10		1.80	QX 0	6.80	Q.		•	3.90	ON ON
Zinc, Dissolved	mg/kg	4.80	0	6.30	_	3.70	0	13		•		8.60	0
1 rH Total Petroleum Hydrocarbons	arbons mg/kg	5.10	0	16		10		10		•		15	
										•			

Appendix O: Soil Analytical Results Alpena CRTC, Alpena, MI

LOCATOR: SAMPLE ID: COLLECTION DATE:	LOCATOR: MW1 SAMPLE ID: PC-HN8-MW1-SS2- TION DATE: 09/19/87	1 71-SS2-10 87	SB1 PC-HN8-SB1-SS1-4 10/05/87	-SS1-4	SB1 PC-HN8-SB1-SS2-8 10/05/87	1-SS2-8 87	SB1 PC-HN8-SB1-SS3-14 10/05/87	-SS3-14	MW1 PC-RT9-MW1-SS1-2.5 09/19/87	-SS1-2.5 37	MW1 PC-RT9-MW1-SS2-10 09/19/87	1 1-SS2-10 87
UNITS:	: RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
ng/kg ug/kg	O O	S S	00	S S	00	88	00	88	00	8 8 8	00	88
ug/kg ug/kg ug/kg		2222	0000	2222	0000	8888	0000	2222	0000	8888	0000	2222
625 bis(2-Ethylhexyl)phthalate mg/kg	, 340		•		•		•		•		•	
CLP METALS  Arsenic, Dissolved mg/kg Beryllium, Dissolved mg/kg Cadmium, Dissolved mg/kg Chromium, Dissolved mg/kg Copper, Dissolved mg/kg Lead, Dissolved mg/kg Nickel, Dissolved mg/kg Selentium, Dissolved mg/kg	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	% 0.250 N N N	1.20 0.11 0.0 5.80 2.20 1.50 4.30	<u> </u>	1.20 0.22 0 5 5 2.10 1.80	ος ος Ω	0.14 0.08 0 0 2.30 2.30 2.30 2.30	£ £	1.30 0.30 0.740 1.40 6 6	Q X	0 0.25 0 8.10 1.80 1.80 1.5	2
Zine, Dissolved mg/kg TPH Total Petroleum Hydrocarbons mg/kg	_		13		6.60		64		7.7	0	5.40	9
									•			

Appendix O: Soil Analytical Results Alpena CRTC, Alpena, MI

6.5	QUAL	22	2222	S S	S S	Ą		
33 3-SS2-5 2/87				0.20 0.20 0.20 1.10	2.70 0 5.90	0		
SB3 PC-RT9-SB3-SS 09/22/87	RESULT	00	0000 '	40044				
1-2-3.5	QUAL	SS	8888	<b>B</b>	Ž.	QN Q		
SB3 PC-RT9-SB3-SS 09/22/87	RESULT	00	0000 '	1.40 0.19 0 3.90 1.10	2.60 2.60 0 5.10	•	-	
2-5-6.5	QUAL	S C	8888	QN	QN Q			
SB2 PC-RT9-SB2-SS: 09/22/87	RESULT	00	0000	0.73 0.11 0 4 4 1.50	3 0 0 5.70	9.70		
1-1-2.5	QUAL	S S	8888	QN QN	Ä			
SB1 SB3 SB3 -2-3.5 PC-RT9-SB1-SS2-5-11.5 PC-RT9-SB2-SS1-1-2.5 PC-RT9-SB2-SS2-5-6.5 PC-RT9-SB3-SS1-2-3.5 PC-RT9-SB3-SS2-5-6.5 09/22/87 09/22/87 09/22/87	RESULT	00	0000 1	1.20 0.16 0 7 7 0.92	1.40 4 0 7.70	5.20		
S2-5-11.5 1 7	QUAL							
SBI PC-RT9-SB1-SS2 09/22/87	RESULT	1 1		, , , , ,		•		
1-2-3.5 I	QUAL	8 8 8	8888	N O	Š			
SB1 C-RT9-SB1-SS 09/22/87	RESULT	00	0000 '	1.70 0.13 6.30 6.30	1.70 3.60 0 0 6.70	19		
LOCATOR: SB1 SAMPLE ID: PC-RT9-SB1-SS1 COLLECTION DATE: 09/22/87	UNITS:	ug/kg ug/kg	ug/kg ug/kg ug/kg ug/kg	mg/kg mg/kg mg/kg mg/kg	mg/kg mg/kg mg/kg	ns mg/kg		
COLLEC		8010 Tetrachloroethylene Vinyl chloride	8020 Benzene Ethylbenzene Toluene Xylenes (TOTAL) 625 bis(2-Ethylhexyl)phthalate	CLP METALS Arsenic, Dissolved Beryllium, Dissolved Cadmium, Dissolved Chromium, Dissolved Chromium, Dissolved Copper, Dissolved	Lead, Dissolved Nickel, Dissolved Selemium, Dissolved Zinc, Dissolved	TPH Total Petroleum Hydrocarbons		
		8 <del>2</del> 2	E R E K S S S E R S S S S S S S S S S S S S S S	ರ 2 % ೮ ೮ ೮	32%N	FF		

Appendix O: Soil Analytical Results Alpena CRTC, Alpena, MI

32-5-6.5	QUAL	28	2222	<b>Q</b>	Ž	
SB6 PC-RT9-SB6-SS2 09/23/87	RESULT	00	0000	- 1.80 0.24 0 6.40	2.10 2.70 0 5.90	2
31-2-3.5	QUAL	88	2222	<b>S</b>		
SB6 PC-RT9-SB6-SS 09/23/87	RESULT	00	0000	1.60 0.20 0 6.30	1.70 3.40 1.10 4.60	-
2-5-6.5	QUAL	8 S	5555	QN QN		
SB5 PC-RT9-SB5-SS; 09/23/87	RESULT	00	0000	0.55 0.21 0 5.50 1.50	3 3 1.70 6	2
31-2-3.5	QUAL	88	2222	Q.		
SB5 PC-RT9-SB5-SS 09/23/87	RESULT	00	0000	1.10 0.26 0 7 10	2 5.10 2 4.90	
-10-11.5	QUAL					
SB4 C-RT9-SB4-SS2- 09/33/87	RESULT	1 3	1 1 1 1			
I-2-6.5 PC	QUAL	N	2222		<b>Q</b>	
SB4 C-RT9-SB4-SS 09/23/87	RESULT	27	0000	- 0.12 0.19 0.53 4.20 2.20	8.80 0 15 15	
LOCATOR: SB4 SB4 SB5 SB5 SB5 SB5 SB5 SB6 SB6 SB6 SB6 SB6 SB6 SB6 SAMPLE ID: PC-RT9-SB4-SS1-2-6.5 PC-RT9-SB4-SS2-5-6.5 PC-RT9-SB6-SS1-2-3.5 PC-RT9-SB6-SS1-2-3.5 PC-RT9-SB6-SS2-5-6.5 COLLECTION DATE: 09/23/87 09/23/87 09/23/87 09/23/87 09/23/87	UNITS:	ug/kg ug/kg	ng/kg ng/kg ng/kg	118/kg 118/kg 118/kg 118/kg 118/kg		
COFTE		8010 Tetrachloroethylene Vinyl chloride	8020 Benzene Ethylbenzene Toluene Xylenes (TOTAL)	bis(2-Ethylhexyl)phthalate CLP METALS Arsenic, Dissolved Beryllium, Dissolved Cadmium, Dissolved Chromium, Dissolved Chromium, Dissolved Choper, Dissolved	Lead, Dissolved Nickel, Dissolved Selemium, Dissolved Zinc, Dissolved TPH Total Petroleum Hydrocarbons	,

Appendix O: Groundwater Analytical Results Alpena CRTC, Alpena, MI

MW3 PC-MP2-MW3-GW2 08/16/88	T QUAL					0 ND	
PC-MP2	RESULT						0 0 0
3 73-GW1 87	QUAL	88 88	22 2	QX QX	0 ND 0 ND 0 ND 2.20 3.60	<del>S</del>	6.20 0 ND 2.10 ND 0 ND 0 ND 0 ND
MW3 PC-MP2-MW3-GW1 11/09/87	RESULT	00 100 1	90010	00 '	000 1 4 1 8 0	0 260	6.20 0 2.10 0 8.40 0
72-GW2 88	QUAL	22222	22222			S S	
MW2 PC-MP2-MW2-GW2 08/15/88	RESULT	00000	00000			130	
2-GW1	QUAL	88 88	88 8	<del>8</del> 8	999 9	S S	8 8 8
MW2 PC-MP2-MW2-GW1 11/09/87	RESULT	00'00'	5.50 0 0 -	00 '	0 0 0 1.10 3	210	0.76 0 0.49 0 4.40
1-GW2 8	QUAL	22222	22222			ğ	
MW1 PC-MP2-MW1-GW2 08/14/88	RESULT	00000	0000	1 1 1		240	
-GW1	QUAL	ON ON	88 8	a d	<b>8</b> 8 8 8		2 2 2
MW1 PC-MP2-MW1-GW1 11/05/87	RESULT	0 0 - 3.70 4.60	5.40 0 0 -	00 '	0 0 0 0.83 12 0	0.22 330	40 0 0.75 0 60 0
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	ngu Ngu Ngu Ngu Ngu	ngn 1/gn 1/gn 1/gn	ligu Ilgu Ilgu	Lgn ngh ngh ngh ngh ngh ngh ngh	ns mg/l	
COTTE		8010 1,2-Dichloroethane 1,2-trans-Dichloroethylene Benzene Bromodichloromethane Chloroform Ethylbenzene	Methyl chloride Methylene chloride Tetrachloroethylene Toluene Trichloroethylene	8020 Benzene Toluene 625 bis(2-Ethylhexyl)phthalate	CLP MEIALS Arsenic, Dissolved Beryllium, Dissolved Copper, Dissolved Polassium Polassium, Dissolved Sodium Sodium, Dissolved Zinc, Dissolved	TPH Total Petroleum Hydrocarbons E160.1 Total Dissolved Solids E300.1	Chloride Fluoride Nitrate Nitrogen Nitrite Nitrogen Sulfate

Appendix O: Groundwater Analytical Results Alpena CRTC, Alpena, MI

-GW2	QUAL	222222222	Š		
MW1 PC-CG3-MW1-GW2 08/14/88	RESULT	0000000000	0	200	
-GW1	QUAL	22 22 22 2 22 22 22 2 22 22 2 22 2 22			
MW1 PC-CG3-MW1-GW1 11/05/87	RESULT	0 0 0 5.50 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.22	210	<b>2</b> 000040
-GW2	QUAL	222222222	Z		
MW5 PC-MP2-MW5-GW2 08/15/88	RESULT	,0000000000	0	780	1 1 1 1 1 1
-GW1	QUAL		S		888 8
MW5 PC-MP2-MW5-GW1 11/09/87	RESULT	4.30 0 0 0 0 0 0 0 0 0 0 0 0 0	0	1800	960 0 0 0 0 0
4-GW2 8	QUAL	222222222			
MW4 PC-MP2-MW4-GW2 08/15/88	RESULT	0000000000	1.10	220	
LGW1	QUAL				
MW4 PC-MP2-MW4-GW1 11/10/87	RESULT	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	460	200	6 0 1.80 0 12 0
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	ngh ngh ngh ngh ngh ngh ngh ngh ngh ngh	arbons mg/l	l/gm	mg/l mg/l mg/l mg/l mg/l mg/l
<b>70</b> 0		8010 1,2-Dichlorochane 1,2-trans-Dichlorochylene Benzene Bromodichloromethane Chloroform Ehylbenzene Methylene chloride Tetrachlorochylene Trichlorochylene	TPH Total Petroleum Hydrocarbons	E160.1 Total Dissolved Solids	Chloride Fluoride Nitrate Nitrogen Nitrite Nitrogen Sulfate ortho-Phosphate

Appendix O: Groundwater Analytical Results Alpena CRTC, Alpena, MI

-GW2	QUAL	2222	9999	2225					Q.	
MW4 PC-CG3-MW4-GW2 08/18/88	RESULT	0000	0000	000		•	111		0 280	
-GW1	QUAL	22 2	9 99	22 2	22		222		S.	g g
MW4 PC-CG3-MW4-GW1 11/09/87	RESULT	0010	0 ' 0 0	00 10	00	•	000 '	1.40 - 2.70 4	0 270	7440 0 1 0 0 16 16
3-GW2 8	QUAL	2222	2229	2222	}					
MW3 PC-CG3-MW3-GW2 08/17/88	RESULT	0000	000	000	, , ,	i			1 260	
-GW1	QUAL	88 8	2 9	22 2	22		255	QN QN	QX	8 8
MW3 PC-CG3-MW3-GW1 11/09/87	RESULT	00 '0	0 - 4.60	0010		4	000'	1.20 - 3.90 0	240	22 0 0.58 0 11 0.22
2-GW2 8	QUAL	2222	222	2225	)				ă	
MW2 PC-CG3-MW2-GW2 08/17/88	RESULT	0000	000	000	, , ,	t			970	
-GW1	QUAL	88 8		22 9	2 2 2		888	ND	ă	8 8 8
MW2 PC-CG3-MW2-GW1 11/09/87	RESULT	00'0	0 1.90	00'6			0001	3.70 - 5.80 0	340	17 0 0.81 0 37 0
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	f/gu f/gu f/gu f/gu	/gu //gu f/gu	1/8n 1/8n 1/8n	i/Sn {/Sn	l/gu	l/gu f/gu f/gu	flym flym flym flym	ns mg/l mg/l	mg/l mg/l mg/l mg/l mg/l
COLLE		8010 1,2-Dichloroethane 1,2-trans-Dichloroethylene Benzene Bromodichloromethane	Chloroform Ethylbenzene Methyl chloride	Methylene chloride Tetrachloroethylene Toluene	8020 Berzene Toluene	625 bis(2-Ethythexyt)phthalate	CLP METALS Arsenic, Dissolved Beryllium, Dissolved Copper, Dissolved Potassium	Potassium, Dissolved Sodium Sodium, Dissolved Zinc, Dissolved	TPH Total Petroleum Hydrocarbons E160.1 Total Dissolved Solids	E300.1 Chloride Fluoride Nitrate Nitrogen Nitrite Nitrogen Sulfate ortho-Phosphate

Appendix O: Groundwater Analytical Results Alpena CRTC, Alpena, MI

GW2	QUAL	22	222	225	2	225	)											Q.					
MW2 PC-TF4-MW2-GW2 08/17/88	RESULT	000	000	000	00	000	•	• •		•		•	•					0	390	• 1	•		•
2-GW1	QUAL	88	2 5	Ş	229	2 5	)	25				25	2			Š		Q.					
MW2 PC-TF4-MW2-GW1 11/06/87	RESULT	00	00	) ' C	00	o ' c	•	00		1		00	0		•	. 0		0	320	1	•	1 1	•
I-GW2 8	QUAL	88	225	25	229	225												Š					
MW1 PC-TF4-MW1-GW2 08/17/88	RESULT	000	000	000	000	000	•	1 1		ı			•					0	210				•
I-GW1 7	QUAL	88	2 2		28		1	25				2 5	2			Š		Q					
MW1 PC-TF4-MW1-GW1 11/05/87	RESULT	00		. 1	0	• • •	•	00		•		00	0		•	0		0	344	•			•
5-GW2 8	QUAL	22	222	22	29	225	!											N					
MW5 PC-CG3-MW5-GW2 08/18/88	RESULT	000	000		000	000	•	• •		•			•		•			0	140	1 1	1		•
-GW1	QUAL	88	2 2		2 5			88				2 5	Š							Ş		Q	N Q
MW5 PC-CG3-MW5-GW1 11/10/87	RESULT	00	. 00	6.40	000	> ' <b>c</b>		00		•		00	0 0	0.52	1.70	. 13		180	310	1.10	0.58	0 []	0
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	l/ân V	I/an I/an	ng/l	l/gu	l/gu I/gu I/ou	s .	ng/l I/gu		1/gn		[/gn [/on	∫/gn ∫/gn	mg/l mg/l	∭gm 1,5m	ng/i l/gu		ons mg/l	l/gm	l/gm l/om	mg/l	mg/l mg/l	ng/l
COLLI		8010 1,2-Dichloroethane 1,2-trans-Dichloroethylene	Bromodichloromethane Chloroform	Ethylbenzene Methyl chloride	Methylene chloride	renaciiotoenylene Toluene Trichlomethylene	8020	Benzene Toluene	625	bis(2-Ethylhexyl)phthalate	CLP METALS	Arsenic, Dissolved Beryllium, Dissolved	Copper, Dissolved	Potassium Potassium, Dissolved	Sodium	Sodium, Dissolved Zinc, Dissolved	ТРН	Total Petroleum Hydrocarbons E160.1	Total Dissolved Solids	Chloride Fluoride	Nitrate Nitrogen	Nitrite Nitrogen Sulfate	ortho-Phosphate

Appendix O: Groundwater Analytical Results Alpena CRTC, Alpena, MI

S COLLECT	LOCATOR: SAMPLE ID: COLLECTION DATE:	MW3 PC-TF4-MW3-GW1 11/06/87	, 73-GW1 87	MW3 PC-TF4-MW3-GW2 08/17/88	3-GW2 88	MW4 PC-TF4-MW4-GW1 11/06/87	4-GW1	MW4 PC-TF4-MW4-GW2 08/18/88	4-GW2	MW1 PC-SF5-MW1-GWI 11/06/87	1-GW1 7	MW1 PC-SF5-MW1-GW2 08/21/88	1-GW2 38
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010 1,2-Dichloroethane 1,2-trans-Dichloroethylene	ng/l Ugu	00	88	00	S S	00	S S	00	88	5 3.20		27	Q.
Benzene	l/gu	٠ ح	Ş	0 0	2 5	٠ ح	2	00	2 2 2	٠ ٥	2	150	Š
Bromodicinotomentane Chloroform	l/gn	•	2 2	0	22	0	22	0	2	2.40		0	2
Ethylbenzene	l/gu			0	2	, ,		00	S S	' '		74 0	Ş
Methyl chloride  Methylene chloride	I/dn I/dn		QX	0	2 2	). 	Q.	0	2 2	9.0		0	2 2
Tetrachloroethylene	Vgn	0	£	0	S	0	S	0	QN.	0	Q	۱°	Q
Toluene Trichloroethylene	l/gu l/gu	. 0	Š	00	22	۰ ٥	Š	00	22	0	Ŋ	, °	Š
<b>8</b> 020	)												
Benzene	l/gn	0	QN	•		0	QN	,		200		•	
Toluene	l/gu	0	Š	•		0	S	•		78		•	
625	z.									,		1	
bis(2-Ethylhexyl)phthalate	ng/t	•		•		•		•		•		•	
CLP METALS	2		•			•	į			•	ş		
Arsenic, Dissolved Bervllium, Dissolved	1/8n 1/3n	0	22			0	22			0	28		
Copper, Dissolved	Vgn	0	Q	•		0	ΩN	,		0	Š	•	
Potassium Potassium Dissoluted	mg/l	•		•						- 1	_		
Fodassium, Dissolved Sodium	me/l							•				•	
Sodium, Dissolved	mg/1	•		ı		•		•		4.20		,	
Zinc, Dissolved	l/gu	0	S	•		0	Q	•		0	S	•	
ТРН													
Total Petroleum Hydrocarbons	mg/l	0	Q.	0	S	0	Ş	0	Ω	0.35	10	2.20	0
E160.1 Total Dissolved Solids	mg/I	390		370		310		260		269		510	
E300 I													
Chloride	mg/l	•		•		•		•		7		•	
Fluoride	mg/l	1		•		•		•				• 1	
Nitrale Nitrogen	i ge	• 1								. 1			
Nime introgen Sulfate	mg/1							•		•		•	
ortho-Phosphate	mg/l	ı		1		1		1		•		•	

Appendix O: Groundwater Analytical Results Alpena CRTC, Alpena, MI

4-GW2	QUAL	5 5	2	Q	Q.	2 5	2 2	Ē	Ž	Q																£										
MW4 PC-SF5-MW4-GW2 08/21/88	RESULT	00	•	0	0	00	o c	· c	0	0		1	ı		•			•	•			•	•	•		0		91			•	•			1	
LGW1	QUAL	25	3	Ş	Ş	Ş	ž	Ş	) :	Š			Š					2	2 5	Ž			_	R		_										
MW4 PC-SF5-MW4-GW1 11/06/87	RESULT	00	۰ ۱	0	0	٠ ٥		· c	, ,	0		38	0		•			0	0	י פ	690	,	2.30	0		0.34		250			-	•	•		•	
1-GW2 8	QUAL	8 8	2	Q.	S	2	Z Z	Ę	2	Q.																S										
MW3 PC-SF5-MW3-GW2 08/21/88	RESULT	00	0	0	0	0	<b>-</b>	· c	0	0		•	Ì		1			•	•	• •	1 1	•	•			0		360			•	,			•	
-GW1	QUAL	25	3	N N	S	5	2 2	Ę	)	Ω		S	S					2	2 5	2				Q												
MW3 PC-SF5-MW3-GW1 11/06/87	RESULT	00	י	0	0	٠,	<b>-</b> C	· C	, 1	0		0	0		,			0	> 0	י כ	- 1		4.90	0		0.42		292			1	•	•		•	
2-GW2	QUAL	25	2	Q	Q	2 5	2 5	2	2	R																S										
MW2 PC-SF5-MW2-GW2	RESULT	00	0	0	0	00	<b>-</b>	• <b>c</b>	0	0		,	•		ı			•	•	• (		•	•	ı		0		•			•	•	•	, ,	•	
-GW1	QUAL	S S	2	ΔÑ	Ω	Ş	a c	Ē	)	ΩN		ND	ND					2	5 5	Ž				N Q								Ž			QN	
MW2 PC-SF5-MW2-GW1 11/05/87	RESULT	00	יי	0	0	٠ ٥	0	· c	, 1	0		0	0		•			0	> 0	י כ	1 70	,	12	0		0.77		780		•	380	6.0	-	160	0	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	ug/f	i Sin	1/gn	l/Sn	l/gu	1/8n 1/00	1/6m	/gn	l/Sn		₩an ng/f	ng/I		l/gn	ì		/8n	1/8n	ngn Wed	Volt.	E A	1/gm	1/Sn		ins mg/1		l/gm	ı	•	l/gm			Ilgii Ilou	mg/l	
СОГГЕ		8010 1,2-Dichloroethane 1,2-trans-Dichloroethylene	Benzene	Bromodichloromethane	Chloroform	Ethylbenzene Methyl Ethylda	Methylene chloride	Tetrachlomethylene	Toluene	Trichloroethylene	8020	Benzene	Toluene	<b>3</b> (3)	bis(2-Ethylhexyl)phthalate	1	CLP METALS	Arsenic, Dissolved	Derymum, Dissolved	Copper, Dissolved	Polassium Dissolved	Sodium	Sodium, Dissolved	Zinc, Dissolved	Hall	Total Petroleum Hydrocarbons	E160.1	Total Dissolved Solids		E300	Chloride	Nitrate Nitrogen	Nitrite Mittogen	Sulfate	ortho-Phosphate	

Appendix O: Groundwater Analytical Results Alpena CRTC, Alpena, MI

-GW1	QUAL	8 g	22	S S	QN QN	22	Š	222			888 g
MW2 PC-LF6-MW2-GW1 11/10/87	RESULT	00 1	00	2.50 0 0	0	00	0	000	130	220	0,3000
-GW2	QUAL	222		222	22				Ä		
MW1 PC-LF6-MW1-GW2 08/14/88	RESULT	000	· • • •	OT: 0 0 0	00		•		0	170	* 1 1 1 1 1
-GW1	QUAL	88	<u>8</u> 8	S S S	QX QX	S S	Š	8 8 8 8 8 8			O O O O
MW1 PC-LF6-MW1-GW1 11/10/87	RESULT	00	00	- 2.40 0	. 0	00	0	00011116	200	210	1.40 0 0 0 37 37 0.06
-GW2	QUAL	225	222	22 2	S S				ND QN		
2 MW6 PC-SF5-MW6-GW2 08/21/88	RESULT	000	000	0 0 7.50 0	00	1 1	•	1 1 1 1 1 1 1 1	0	220	11111
5-GW2 8	QUAL	QN Q	225	222	Q.				ND		
MW5 PC-SF5-MW5-GW2 08/21/88	RESULT	0 0 5	200	<u>စ</u> ္က ၀ ၀ ၀	120	1 1	•			480	1 1 1 1 1 1
-GW1	QUAL	88	25	222	Q	S S		S S S S S S S S S S S S S S S S S S S			22 2
, MW5 PC-SF5-MW5-GW1 11/05/87	RESULT	00	00	1000	0	00	,	0 0 0 1.80 1.2	0.50	830	420 0.42 0 0 190 0
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	ne		Tgu Agu Agu	√8n √8n	l/gu 1/gu	nalate ug/l	ugil ugil ugil ngil ngil ngil	frocurbons mg/l	llgm sp	mg/l mg/l mg/l mg/l mg/l
		8010 1,2-Dichloroethane 1,2-trans-Dichloroethylene	Bromodichloromethane Chloroform	Ethylbenzene Methyl chloride Methylene chloride Tetrechlomethylene	Toluene Trichloroethylene	8020 Benzene Toluene	625 bis(2-Ethylhexyl)phthalate	CLP METALS Arsenic, Dissolved Beryllium, Dissolved Copper, Dissolved Potassium Potassium, Dissolved Sodium, Dissolved Zinc, Dissolved	TPH Total Petroleum Hydrocarbons	Total Dissolved Solids	Chloride Fluoride Nitrate Nitrogen Nitrite Nitrogen Sulfate ortho-Phosphate

<sup>1)</sup> duplicate of SF5-MW5-GW1 2) duplicate of SF5-MW4-GW2

Appendix O: Groundwater Analytical Results Alpena CRTC, Alpena, MI

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5 75-GW1 87	QUAL	25	Š	25			Q	Z		25	5	Z		ZZ	Z				Z			Z			Z	Z	4 Z	
MW5 PC-LF6-MW5-GW1 11/10/87	RESULT	00	۰ ۱	00		† 0	0	0		00		0		00	0	•		•	0	33	}	0		0.13	0	0	00	
t 4-GW2 88	QUAL	2 5	2		25	2	2 2	Ì												c								
MW4 PC-LF6-MW4-GW2 08/21/88	RESULT	00	0	5.70	00	0	00	11			Ì	•			•	•		•	•	1.20		230		<b>L</b>		•		
1 LGW1 7	QUAL	25	2	8 8	!	QX QX	N	S		25		S		22	N	Ş	Ž		Š	Q				2	2 2	2	22	
MW4 PC-LF6-MW4-GW1 11/09/87	RESULT	00	יי	00		0	0	0		00	>	0	,	00	0	, ,	۰ د	0.04	0	c		-		0 (	00	0	0	
-GW2	QUAL	ON S	2	Q N	2 5		25	9												S	!							
MW3 PC-LF6-MW3-GW2 08/21/88	RESULT	00	•	0	00	5.40	00	12		•	1	•			•	•		•	•	0		230		ı		•		
-GW1	QUAL	25	)	Š		Š	Q			Ş	3	Š		o o	QN Q			;	S						2 2	QX	Ž	
MW3 PC-LF6-MW3-GW1 11/10/87	RESULT	00	<b>,</b> ,	0 41	7 80	0	0	12		7.40	>	0	•	0	0	1	1 1	1.4	0	14		190		6.50	00	0 ;	30	
2-GW2 8	QUAL	S S	Š	25	25	Q R	25	2 2												8								
MW2 PC-LF6-MW2-GW2 08/21/88	RESULT	00	0	00	00	0	00	0				•		1 1	•	•		•	•	0		190		•		1	1 1	
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00		8010 1,2-Dichloroethane 1,2-trans-Dichloroethylene	Benzene	Bromodichloromethane Chloroform	Ethylbenzene Methyl chloride	Methylene chloride	Tetrachloroethylene Tohrene	Trichloroethylene	8020	Benzene Toluene	303	023 bis(2-Ethylhexyl)phthalate	CLP METALS	Arsenic, Dissolved Beryllium, Dissolved	Copper, Dissolved	Potassium Potassium Dissolved	Sodium	Sodium, Dissolved	Zinc, Dissolved	TPH Total Petroleum Hydrocarbons	E160.1	Total Dissolved Solids	E300.1	Chloride	Nitrate Nitrogen	Nitrite Nitrogen	ortho-Phosphate	

1) duplicate of LF6-MW3-GW1

Appendix O: Groundwater Analytical Results Alpena CRTC, Alpena, MI

P.C.HING-RAW   C.C.HING-RAW   C.C.	H COL	1444		MAN		CWM		CWM		MW3		MW3	
Number   N	SAMPLE ID: COLLECTION DATE:		v1-GW1 87	PC-HN8-MW 08/18/8	71-GW2 38	PC-HN8-MW 11/07/8	72-GW1	PC-HN8-MW 08/19/8	72-GW2 88	PC-HN8-MW 11/07/8	3-GW1	PC-HN8-MV 08/19/	/3-GW2 88
The state of the s	UNITS		QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
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ugit         0         ND         0         ND         0         ND         0         ND         0           mg/l         284         340         270         280         330         220           mg/l         -         -         -         -         0         ND         -           mg/l         -         -         0         ND         -         0         ND           mg/l         -         0         ND         -         0         ND         -           120         ND         -         0         ND         -         0         -			9	•		۰ -	2			<u>«</u>		•	
mg/l         284         340         ND         0         ND	an de la companya de		S	•		>	2	•		01			
mg/l         284         340         ND         0         ND         0         ND         0           mg/l         284         340         270         280         330         220           mg/l         -         -         0         ND         -         0         ND         -           mg/l         -         0         ND         -         0         ND         -		202000											
mg/l         284         340         270         280         330           mg/l         -         -         23         -         0         ND           mg/l         -         0         ND         -         0         ND           mg/l         -         0         ND         -         0         ND           mg/l         -         0         ND         -         114           mg/l         -         0         ND         -         1120			S	0	S	0	S	0	S	0	S	0	ΩŽ
mg/l         -         -         23         -         27 + 0		000000											
mg/l         284         340         270         280         330           mg/l         -         -         0         ND         -         0         ND           mg/l         -         -         0         ND         -         0         ND           mg/l         -         -         0         ND         -         0         ND           mg/l         -         -         0         ND         -         114           mg/l         -         -         0         ND         -         1120				;		į		9		000		č	
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mg/l 27 + 0 ND - 0 ND - 0 ND - 3.20 ND - 3.20 ND - 0 ND - 11.20 ND - 11.20		9993											
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mg/l - 0 ND - 0 14 mg/l - 10 ND - 120 120						-		•		3.2		•	
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						90		1		1.2	0	•	
	di.												

Appendix O: Groundwater Analytical Results Alpena CRTC, Alpena, MI

I-GW2 8	QUAL	222222222	Ş	
MW1 PC-RT9-MW1-GW2 08/15/88	RESULT	0000000000 11 1 1111111	0	270
-GW1	QUAL	66         68<	Š	
MW1 PC-RT9-MW1-GW1 11/05/87	RESULT	0 0 0 1 1 0 1 1 8 0 0 0 0 0 0 0 0 0 0 0	0	18 5 - 1 - 1 - 1
5-GW2 8	QUAL	222222222	QN QN	
MW5 PC-HN8-MW5-GW2 08/19/88	RESULT	0000000000 11 1 111111	0	220
-GW1	QUAL	22 22 22 2 22 2 222 2 2 2 2 2 2 2 2 2 2	Q.	5 5555
MW5 PC-HN8-MW5-GW1 11/07/87	RESULT	00 00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0	0 0.12 0.13 0 0
LGW2	QUAL	222222222	Š	
MW4 PC-HN8-MW4-GW2 08/19/88	RESULT	000000000000000000000000000000000000000	0	190
-GW1	QUAL	22 22 22 22 22 22 22 22 22 22 22 22 22 2	N Q	ă ă
MW4 PC-HN8-MW4-G' 11/07/87	RESULT	0 0 3.30 0 0 0 17 17	0	180 3.50 0 1.40 0 9.40 0.06
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	Ugu Ugu Ugu Ugu Ugu Ugu Ugu Ugu Ugu Ugu	ons mg/l	ngh ng/l ng/l ng/l ng/l
COLL		9010 1,2-Dichloroethane 1,2-trans-Dichloroethylene Benzene Bromodichloromethane Chloroform Ethylbenzene Methylene chloride Methylene chloride Tetrachloroethylene Toluene Trichloroethylene Trichloroethylene Toluene Trichloroethylene Toluene Toluene CLP METALS Benzone Toluene CLP METALS Arsenic, Dissolved Beryllium, Dissolved Peryllium, Dissolved Perssium Potassium Potassium Sodium Sodium Sodium Sodium, Dissolved Zinc, Dissolved	I PH Total Petroleum Hydrocarbons	E160.1 Total Dissolved Solids E300.1 Chloride Fluoride Nitrate Nitrogen Nitrite Nitrogen Sulfate ortho-Phosphate

1) duplicate of HN8-MW5-GW1

Appendix O: Groundwater Analytical Results Alpena CRTC, Alpena, MI

MW4 PC-RT9-MW4-GW2	RESULT QUAL	000	QX QX	00	00	00		•				QN 0 C	,	ı	, ,			, ,,,,,									
MW4 PC-RT9-MW4-GW1 11/11/87	RESULT QUAL	ON O	. o o	ON O	0 21	ON O	O O O O	•	O O O		ON O	0 ND	684		1	<u>.</u> ' '	1'''	11111	1	1	1	1	1,,,,,	1	1	1	111111
	QUAL RI	999	222	<u>8</u> 8	<u> </u>	<u> </u>						Q.															
MW3 PC-RT9-MW3-GW2 08/19/88	RESULT	000	000	00	00	00		1			, ,	0	490		•	, , ,			11111	1111	11111	11111	11111	1 1 1 1 1 1 1	11111	11111	
v3 [w3-GW1 1/87	QUAL	a a	88			S	N N		222		QX	ΩN			,												
MW3 PC-RT9-MW3-GW1 11/11/87	RESULT	00	'00		00	0	00	•	000		0	0	280		·	, , ,			,,,,,,								
/2 W2-GW2 //88	QUAL	22	222	25	55	25						S.															
MW2 PC-RT9-MW2-GW2 08/19/88	RESULT	000	000	00	00	00	1 1	,	1 1 1		, ,	0	300		•			, , , , ,					, , , , , , ,	, , , , , , ,		, , , , , ,	
2 V2-GW1 87	QUAL	S S	222	Q	<u>8</u> 8	N	N N		888		ND	Ä															
MW2 PC-RT9-MW2-GW1 11/11/87	RESULT	00	100	0	00	0	00	·		1 1 1	• 0	0	280														
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	26	ug/l sromethane ug/l ug/l				l/gu L/gu	625 bis(2-Ethylhexyl)phthalate ug/l	po	ę		TPH Total Petroleum Hydrocarbons mg/l	ived Solids mg/l		l/gm												
		8010 1.2-Dichloroethane 1.2-trans-Dichloroethyle	Benzene Bromodichloromethane Chloroform	Ethylbenzene Methyl chloride	Methylene chloride Tetrachloroethylene	Toluene Trichloroethylene	8020 Berzene Toluene	625 bis(2-Ethylk	CLP METALS Arsenic, Dissolved Beryllium, Dissolved Copper, Dissolved	Potassium Potassium, Dissolved Sodium	Sodium, Dissolved Zinc, Dissolved	TPH Total Petrol	E160.1 Total Dissolved Solids		E300.1 Chloride	E300.1 Chloride Fluoride Nirate Nir	E300.1 Chloride Fluoride Nitrate Nitrogen Nitrite Nitrogen	E300.1 Chloride Fluoride Nitrate Niti	E300.1 Chloride Fluoride Nitrate Nitr Nitrite Nitr Sulfate	E300.1 Chloride Fluoride Nitrate Nitr Nitrite Nitr Sulfate	E300.1 Chloride Fluoride Nitrate Nitr Nitrite Nitr Sulfate ortho-Phos	E300.1 Chloride Fluoride Nitrate Nitrogen Nitrite Nitrogen Sulfate ortho-Phosphate	E300.1 Chloride Fluoride Nitrate Nitr Nitrite Nitr Sulfate ortho-Phos	E300.1 Chloride Fluoride Nitrate Nitr Nitrite Nitr Sulfate ortho-Phos	E300.1 Chloride Fluoride Nitrate Nit Nitrie Nit Sulfate ortho-Phos	E300.1 Chloride Fluoride Nitrate Nin Nitrite Nitr Sulfate ortho-Phos	E300.1 Chloride Fluoride Nitrate Nith Nitrite Nitr Sulfate ortho-Phos

Appendix O: Groundwater Analytical Results Alpena CRTC, Alpena, MI

	QUAL	Š	Ω	Š	Ę		2	22		Š		2	Q Z		Q			Q.	S				N Q								Q		S
GW1 PC-PW2-GW1 11/03/87	RESULT Q	0	0	' C	0	,	5.50	•	•	0	,	0	0		0		v	0	0		0.62	230	0		0.10		840	į	3/0	0.20	0	19	0
W2 8	QUAL	8 Q	25	2 5	Ê	2	2 2	28	S	Ð															Š								
GW2 PC-PW1-GW2 08/18/88	RESULT	0	00	<b>&gt;</b> C	0	0	00	0	0	0		•			•		ı	•	•	•	•		•		0		950		ا يا	•		1	ı
. w	QUAL	N Q	Q	Š	2		Ş	22		Q Q		2	Q					Š	Q.				Ω		Š				Š		Q		<u>S</u>
GW1 PC-PW1-GW1 11/03/87	RESULT	0	0	' C	0		5.60	0	,	0	,	0	9		15		v	0	0	• (	0.88	' %	0		0		1300	ç	084 0	0.82	0	17	0
-GW2	QUAL	Š	25	2 5	S	2	2 2	22	Š	ð															Q								
MW6 PC-RT9-MW6-GW2	RESULT	0	00	<b>&gt;</b> C	0	0	00	0	0	0		į	1		1		1	•	•	•	•		•		0		ı			•	•	ı	ı
5-GW2 8	QUAL	QX	25	2 2	2	2	2 5	2	Q	Š															Ö								
MW5 PC-RT9-MW5-GW2 08/21/88	RESULT	0	00	0	0	0 (	0 0	0	0	0		•			1		٠	1	•	•	•		•		0		300			•	•	1	1
5-GW1 7	QUAL	ND	ΩN	Š	S		2	28		Š	;	2	Q				CZ	2	QN						Š								
MW5 PC-RT9-MW5-GW1 11/11/87	RESULT	0	0		0	' (	2.50	0	•	0	•	0	>		•		C	0	0	•	•		7	,	0		330			•	•	•	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	I/gn	l/gu Leu	l/gn	l/gu	[/an	l/gn	l/gu	ug/I	ug/I	1	l/gn	1/gn		l/gu		l/on	1/gn	l/gu	mg/l	l/gm	mg/l me/l	l/gu		l/gm st		mg/l	ŧ	mg/1	I/am	mg/f	T/gm	ng/l
COLLEC		8010 1,2-Dichloroethane	1,2-trans-Dichloroethylene	Bromodichloromethane	Chloroform	Ethylbenzene	Methyl chloride	Tetrachloroethylene	Toluene	Trichloroethylene	8020	Benzene	lojuene	625	bis(2-Ethylhexyl)phthalate	CIDMETATS	Arsenic, Dissolved	Beryllium, Dissolved	Copper, Dissolved	Potassium	Potassrum, Diasolved	Sodium, Dissolved	Zinc, Dissolved	TPH	Total Petroleum Hydrocarbons	E160.1	Total Dissolved Solids	E300.1	Cilionae Fluoride	Nitrate Nitrogen	Nitrite Nitrogen	Sulfate	ortho-Phosphate

Appendix O: Groundwater Analytical Results Alpena CRTC, Alpena, MI

COLLECTION DATE:	5: PC-PW2-GW2 5: PC-PW2-GW2 E: 08/18/88	-GW2 /88	PC-PW3-GW1 11/03/87	3W1	PC-PW3-GW2 08/18/88	GW2 88	PC-PW4-GW1 11/03/87	3W1	PC-PW5-GW1 11/04/87	87. 1	PC-PW6-GW1 11/04/87	6w1 87	
UNITS:	S: RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	
8010 1,2-Dichloroethane ug/l 1,2-trans-Dichloroethylene ug/l		8 8 8	00	8 8 8	00	88	00	S S	00	<u>8</u> 8	00	22	
omethane		222	0 1.70	QN C	000	222	.00	SS	,00	S S	'00	S S	
Ehlybenzene ug/l Methyl chloride ug/l Methylene chloride ug/l		2222	5.50 0 0	22	0000	2222	- 4.30 0	N S	, 000	22	6.30 0	0 2 2	
		222	0	2	000	22	0	2		2	0	<del>2</del>	
l gu R	55		00	88	1 1		00	88	00	88	00	88	
625 bis(2-Ethylhexyl)phthalate ug/l	5		0	Ö	•		49		0	Š	0	<del>S</del>	_
CLP METALS Arsenic, Dissolved ug/I Beryllium, Dissolved ug/I			00	22			0.3(	ă O	00	22	00	22	
			0 '	2			0 '	Đ.	. 0 '		0 '		
Potassium, Dissolved mg/l Sodium Sodium, Dissolved mg/l			2 7.90	•	1 1 1		0.46	<b>v</b> 0	0.77	۲	0.71	= 3	
		!	160		1 (	!	6		37	(	36	•	
Total Petroleum Hydrocarbons mg/l E160.1 Total Dissolved Solids mg/l	0 0 20 1500	Q Z	0 091	£	200	2	0.10	6	0.29	<u>e</u> .	0.10	<u>e</u>	
E300.1 Chloride mg/l Fluoride mg/l Nitrie Nitrogen mg/l	5555		19 0 2.20 0.13	S &			2.40 0.69 0	QX QX	41.90 11.40 0.27 0	8 8 7. ND	0.84 0.04 0	3.3 5.8	0.0
			13	QN QN	1 1		4.80 0		18		17 0		

Appendix O: Groundwater Analytical Results Alpena CRTC, Alpena, MI

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  | 0  | 21.0  | 270   | ,   | 0.04                 | 0  | 31   | 0   |  
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   | l/Sn<br>V-:-  
  | r Sp   | mg/l  
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  |  |   | l/gm  |   | ng/                  | mg/I   | mg/l   | mg/l  |  
  |
|        | 8010                                    | 1,2-Dienioroemane 1,2 franc Diehlomenturlane | i, r. dans Living Comprehenses   | Bromodichloromethane   | Chloroform                            | Ethylbenzene  | Methyl chloride  | Meurylene chloride Tetrachlomethylene               | Toluene      | Trichloroethylene   | 8020  | Benzene  | Toluene   | 625  | bis(2-Ethylhexyl)phthalate  | CLP METALS  | Arsenic, Dissolved   
   | Beryllium, Dissolved  
  | Copper, Dissolved  | Potassium, Dissolved  
  | Sodium  | Sodium, Dissolved<br>Zinc, Dissolved   
  | TPH<br>Total Percelana Hydrocarbon   | tom i cantamin rigarorano   | E160.1<br>Total Dissolved Solids  | E300.1  | Chloride<br>Fluoride | Nitrate Nitrogen   | Sulfate  | ortho-Phosphate   |  
  |
|        | RESULT QUAL RESULT QUAL RESULT          | UNITS: RESULT QUAL RESULT QUAL RESULT        | UNITS: RESULT QUAL RESULT QUAL RESULT ichilorochhane ug/i 0 ND 0 ND 0 | UNITS: RESULT QUAL RESULT RESULT RESULT (STATE NOT | UNITS: RESULT QUAL RESULT QUAL RESULT | UNITS:         RESULT         QUAL         RESULT         QUAL         RESULT           icicliorochtane         ug/l         0         ND         0         ND         0           int         ug/l         0         ND         0         ND         0           odichloromethane         ug/l         -         -         -         -           ofform         ug/l         0         ND         0         ND         0 | UNITS:         RESULT         QUAL         RESULT         QUAL         RESULT           ichlorochtane         ug/l         0         ND         0         ND         0           interprise         ug/l         -         -         -         -         -           odichloromethane         ug/l         -         -         -         -         -           ofform         ug/l         0         ND         0         ND         0           bertzene         ug/l         -         -         -         -         - | UNITS: RESULT QUAL RESULT QUAL RESULT   QUAL RESULT | Comparison   | ichlorochtaine         ug/I         0         ND         0         ND         0           ans-Dichlorochtylene         ug/I         0         ND         0         ND         0           odichlorocethylene         ug/I         -         -         -         -         -           odichloromethane         ug/I         0         ND         0         ND         0           ofform         ug/I         -         -         -         -         -           yi chloride         ug/I         5.10         6.20         ND         6.70           yichorochylene         ug/I         0         ND         0         ND           ollorochylene         ug/I         -         -         -         -           ug/I         0         ND         0         ND         0           nc.70         ug/I         -         -         -         - | inchlorocutame         ug/I         0         ND         0         ND         0           ans-Dichlorocutablene         ug/I         0         ND         0         ND         0           odichloromethane         ug/I         -         -         -         -           offichloromethane         ug/I         0         ND         0         ND           benziene         ug/I         -         -         -           ylchloride         ug/I         5.10         0         ND         0           ylene chloride         ug/I         5.10         6.20         6.70           chlorocitylene         ug/I         -         -         -           lorocutylene         ug/I         -         -         -           lorocethylene         ug/I         -         -         - | inition cutaine         ug/I         0         ND         0         ND         0           ansa-Dichloroethylene         ug/I         -         -         -         -         -           ansa-Dichloroethylene         ug/I         -         ND         0         ND         0           offichloroethylene         ug/I         -         -         -         -         -           offichloroethylene         ug/I         -         ND         ND         ND         0           benzene         ug/I         -         -         -         -         -           yl chloride         ug/I         5.10         6.20         ND         6.70           chloroethylene         ug/I         0         ND         ND         0           one         ug/I         -         -         -           loroethylene         ug/I         0         ND         0         ND | ichilorocthane         ug/1         0         ND         0         ND         0           sine-liorocthane         ug/1         0         ND         0         ND         0           sine-liorocthylene         ug/1         -         -         -         -         -           odichloromethane         ug/1         -         ND         0         ND         0           oform         benzene         ug/1         -         -         -         -           oform         benzene         ug/1         -         -         -         -           oform         ND         0         ND         0         0         0           benzene         ug/1         5.10         6.20         6.70         6.70           chlorocthylene         ug/1         0         ND         0         ND         0           one         ug/1         0         ND         0         ND         0         0 | ich lorocutame         ug/I         0         ND         0         ND         0           intellorocutame         ug/I         -         -         -         -         -           odichlorocutame         ug/I         -         -         -         -         -           odichlorocuthame         ug/I         -         -         -         -         -           of commutation         ug/I         -         -         -         -         -           benzene         ug/I         -         -         -         -         -           yl chloride         ug/I         -         -         -         -         -           yl chloride         ug/I         0         ND         0         ND         0         6.70           yl chloride         ug/I         -         -         -         -         -         -           yl chloride         ug/I         0         ND         ND         ND         ND         0           chlorocutylene         ug/I         -         -         -         -         -           ug/I         0         ND         ND         ND         ND         - | ichloroethane         ug/I         0         ND         0         ND         0           ans-Dichloroethylene         ug/I         0         ND         0         ND         0           ofichloroethylene         ug/I         -         -         -         -         -           offcrm         ug/I         0         ND         0         ND         0           offcrm         ug/I         0         ND         6.20         6.70           ylenchorde         ug/I         0         ND         0         ND           ylenchylene         ug/I         0         ND         ND         0           ohloroethylene         ug/I         0         ND         0         ND           one         ug/I         0         ND         ND         0         ND           one         ug/I         0         ND         ND         0         ND | ichilorocthane         ug/I         0         ND         0         ND         0           sine-Dichlorocthylene         ug/I         0         ND         0         ND         0           sine-Dichlorocthylene         ug/I         -         0         ND         0         ND         0           offichlorocthylene         ug/I         -         ND         0         ND         0           offichlorocthylene         ug/I         -         -         -         -         -           offichrocthylene         ug/I         -         ND         ND         ND         0           chlorocthylene         ug/I         0         ND         ND         ND         0           one         ug/I         0         ND         ND         ND         0           one         ug/I         0         ND         ND         ND         0           chee         ug/I         0         ND         ND         ND         0           chlorocthylene         ug/I         0         ND         ND         0         ND | Control included being continued ansignation of the chlorocity lense         UNITS:         RESULT         QUAL         RESULT         QUA | UNITS:         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         QUAL <td>  UNITS: RESULT QUAL RESULT QU</td> <td>withlorvethane ug/I chlorocthane         ug/I chlorocthane         O ND chlorocthylene         ND chloroct</td> <td>ich lorcethane         ug/1         0         ND         0         ND         0           ans-Dichlorcethylene         ug/1         0         ND         0         ND         0           odichlorcethylene         ug/1         0         ND         0         ND         0           odichlorcoethylene         ug/1         0         ND         0         ND         0           bestreene         ug/1         -         -         -         -         -         -           bestreene         ug/1         -         ND         0         ND         0         ND         0           blene chloride         ug/1         -         &lt;</td> <td>UNITS:         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL           sini-lorcethane         ug/l         0         ND         0         ND         0           sini-Dichlorcethylene         ug/l         0         ND         0         ND         0           odichlorcoethylene         ug/l         0         ND         0         ND         0           odichlorcoethylene         ug/l         -         ND         0         ND         0           of chloride         ug/l         -         ND         0         ND         0           of chloride         ug/l         -         ND         0         ND         0           of chloride         ug/l         0         ND         0         ND         0     <td>UNITS:         RESULT         QVAL         RESULT         QVAL         RESULT         QVAL           sini-lorocethane         ug/l         0         ND         0         ND         0           odichlorocethane         ug/l         0         ND         0         ND         0           odichlorocethylene         ug/l         0         ND         0         ND         0           odichlorocethylene         ug/l         0         ND         0         ND         0           off-chloride         ug/l         5.10         0         ND         0         ND         0           off-chloride         ug/l         0         ND         0         ND         0         ND           off-chloride         ug/l         0         ND         0         ND         0         ND           off-chloride</td><td>UNITS:         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         AND         O         ND         O         ND         O         ND         O         ND         O         ND         O         O         ND&lt;</td><td>cicliorcettane         ug/1         0 ND         ND         ND         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         ND         0         0         ND         0</td><td>UNITS:         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         QUAL</td><td>  Control change</td><td>  UNITS: RESULT QUAL QUAL RESULT QUAL QUAL QUAL QUAL QUAL QUAL QUAL QUAL</td><td>  UNITS: RESULT QUAL RESULT QUAL RESULT QUAL RESULT QUAL sin-birthoroethylene ug/l 0 ND 0 ND 0 ND 0 OO 0 OO 0 OO 0 OO 0 OO</td><td>Control inclination of the i</td><td>Configuration of the configuration of the configu</td></td> | UNITS: RESULT QUAL RESULT QU | withlorvethane ug/I chlorocthane         ug/I chlorocthane         O ND chlorocthylene         ND chloroct | ich lorcethane         ug/1         0         ND         0         ND         0           ans-Dichlorcethylene         ug/1         0         ND         0         ND         0           odichlorcethylene         ug/1         0         ND         0         ND         0           odichlorcoethylene         ug/1         0         ND         0         ND         0           bestreene         ug/1         -         -         -         -         -         -           bestreene         ug/1         -         ND         0         ND         0         ND         0           blene chloride         ug/1         -         < | UNITS:         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL           sini-lorcethane         ug/l         0         ND         0         ND         0           sini-Dichlorcethylene         ug/l         0         ND         0         ND         0           odichlorcoethylene         ug/l         0         ND         0         ND         0           odichlorcoethylene         ug/l         -         ND         0         ND         0           of chloride         ug/l         -         ND         0         ND         0           of chloride         ug/l         -         ND         0         ND         0           of chloride         ug/l         0         ND         0         ND         0 <td>UNITS:         RESULT         QVAL         RESULT         QVAL         RESULT         QVAL           sini-lorocethane         ug/l         0         ND         0         ND         0           odichlorocethane         ug/l         0         ND         0         ND         0           odichlorocethylene         ug/l         0         ND         0         ND         0           odichlorocethylene         ug/l         0         ND         0         ND         0           off-chloride         ug/l         5.10         0         ND         0         ND         0           off-chloride         ug/l         0         ND         0         ND         0         ND           off-chloride         ug/l         0         ND         0         ND         0         ND           off-chloride</td> <td>UNITS:         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         AND         O         ND         O         ND         O         ND         O         ND         O         ND         O         O         ND&lt;</td> <td>cicliorcettane         ug/1         0 ND         ND         ND         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         ND         0         0         ND         0</td> <td>UNITS:         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         QUAL</td> <td>  Control change</td> <td>  UNITS: RESULT QUAL QUAL RESULT QUAL QUAL QUAL QUAL QUAL QUAL QUAL QUAL</td> <td>  UNITS: RESULT QUAL RESULT QUAL RESULT QUAL RESULT QUAL sin-birthoroethylene ug/l 0 ND 0 ND 0 ND 0 OO 0 OO 0 OO 0 OO 0 OO</td> <td>Control inclination of the i</td> <td>Configuration of the configuration of the configu</td> | UNITS:         RESULT         QVAL         RESULT         QVAL         RESULT         QVAL           sini-lorocethane         ug/l         0         ND         0         ND         0           odichlorocethane         ug/l         0         ND         0         ND         0           odichlorocethylene         ug/l         0         ND         0         ND         0           odichlorocethylene         ug/l         0         ND         0         ND         0           off-chloride         ug/l         5.10         0         ND         0         ND         0           off-chloride         ug/l         0         ND         0         ND         0         ND           off-chloride         ug/l         0         ND         0         ND         0         ND           off-chloride | UNITS:         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         AND         O         ND         O         ND         O         ND         O         ND         O         ND         O         O         ND< | cicliorcettane         ug/1         0 ND         ND         ND         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         ND         0         0         ND         0 | UNITS:         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         RESULT         QUAL         QUAL | Control change       | UNITS: RESULT QUAL QUAL RESULT QUAL QUAL QUAL QUAL QUAL QUAL QUAL QUAL | UNITS: RESULT QUAL RESULT QUAL RESULT QUAL RESULT QUAL sin-birthoroethylene ug/l 0 ND 0 ND 0 ND 0 OO 0 OO 0 OO 0 OO 0 OO | Control inclination of the i | Configuration of the configu |

Appendix O: Sediment Analytical Results Alpena CRTC, Alpena, MI

<u></u>	QUAL	QN Q			8 8 8	
SD1 PC-TF4-SD1 09/30/87	RESULT	0		0.95 0.08 0.03 3.50 1.60 2.50	2.70 0 0 4.30	<b>5</b> 1
<b>%</b>	QUAL	S S		ğ	88	
SD5 PC-MP2-SD5 09/30/87	RESULT	0		0.29 0.05 0 0 1.30 0.91	1.50	•
4.	QUAL	N Q		N Q	Z Z Q	
SD4 PC-MP2-SD4 09/30/87	RESULT	0	1 1	1.40 0.06 0 1.50 0.85 0.85	1.60	9.70
8.	QUAL	N Q			S S	
SD3 PC-MP2-SD3 09/30/87	RESULT	0	1 1	0.55 0.26 0.76 4.50 5.10	3.80 0 0 150	85
22.	QUAL	Ž		Š	<del>2</del> <del>2</del>	
SD2 PC-MP2-SD2 09/30/87	RESULT	0		0.15 0.06 0 0 1.60 1.40 5.60	2.20 0 0 0 110	23
<b>5</b> .	QUAL	ă			2 2	
SD1 PC-MP2-SD1 09/30/87	RESULT	0	1 1	1 0.05 0.87 2.80 5	2.50	460
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	ng/kg	mg/kg mg/kg	mg/kg mg/kg mg/kg mg/kg mg/kg	ng/kg ng/kg ng/kg ng/kg	s mg/kg
COLLEC		8020 Toluene 625	Di-n-octyl phthalate bis(2-Ethylhexyl)phthalate	CLP METALS Arsenic, Dissolved Beryllium, Dissolved Cadmium, Dissolved Chromium, Dissolved Copper, Dissolved Leaf Dissolved	Nickel, Dissolved Selenium, Dissolved Thallium, Dissolved Zinc, Dissolved	Total Petroleum Hydrocarboms

Appendix O: Sediment Analytical Results Alpena CRTC, Alpena, MI

60 <sub>~</sub>	QUAL			g g	
SD9 PC-TF4-SD9 11/12/87	RESULT	96	120	0.60 0.19 25 19 21 21 11 11 0	4100
50 7:	QUAL	ă		0.00	
SD6 PC-TF4-SD6 09/30/87	RESULT	0	1 1	5.90 0.51 0.57 16 12 23 23 0.38 44	980
7	QUAL	ă			
SD5 PC-TF4-SD5 09/30/87	RESULT QUAL	0		1.20 0.44 0.28 13 7.20 0.20 6.70 0.38	250
77	QUAL	Š		0 m + 0 0 0 0 m m 0	
SD4 PC-TF4-SD4 09/30/87	RESULT QUAL		i i	0.50 0.18 0.04 3.70 1.80 2.70 0.26 6.30	230
17	QUAL	ă			
SD3 PC-TF4-SD3 09/30/87	RESULT QUAL	0	i 1	1.70 0.18 0.01 3.90 1.30 2.70 2.10 0.34 3.40	15
, D2	QUAL	N		S S S S S S S S S S S S S S S S S S S	
SD2 PC-TF4-SD2 09/30/87	RESULT	0	1 1	2.10 0.07 0.01 9.20 1.30 1.40 5.30 5.60	21
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	ug/kg	mg/kg mg/kg	HIGHER HI	
COLLEC		8020 Toluene 675	Di-n-octyl phthalate bis(2-Ethylhexyl)phthalate	Arsenic, Dissolved Beryllium, Dissolved Cadmium, Dissolved Chromium, Dissolved Chromium, Dissolved Copper, Dissolved Lead, Dissolved Nickel, Dissolved Selenium, Dissolved Thallium, Dissolved Zinc, Dissolved	TPH Total Petroleum Hydrocarbons

Appendix O: Sediment Analytical Results Alpena CRTC, Alpena, MI

	QUAL	Ð	<u> </u>	ND	88	
SD3 PC-LF6-SD3 10/01/87	RESULT Q	0	00	1.40 0.08 0 3.20	1.80 2.40 0 0 4.20	09.6
, D2	QUAL	Q.	88	QN QN	N QN	
SD2 PC-LF6-SD2 10/01/87	RESULT	0	00	0.95 0.25 0 4.30	6.46 3.10 0 10	<b>09.6</b>
16	QUAL	QN Q		Ω.	Š	
SDI PC-LF6-SDI 10/01/87	RESULT	0	0.59	1.20 0.20 0 2.60 1.20	5.20 2.10 1.20 0 4.80	4
SD1	QUAL	QN Q	ON ON	ď	å å	
SP8 PC-TF4-SP8-SD1 10/19/87	RESULT	0	00	3.80 0.05 0 2.80 0.67	0.71 0 0.71 0 1.70	35
SD1	QUAL	N Q	88	ă	N Q	
SP7 PC-TF4-SP7-SD1 10/19/87	RESULT	0	00	0.71 0.06 0 3.90 0.79	1 1.70 1 0 2.70	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	ug/kg	mg/kg mg/kg	mg/kg mg/kg mg/kg mg/kg	mg/kg mg/kg mg/kg mg/kg mg/kg	mg/kg
S		8020 Toluene	625 Di-n-octyl phthalate bis(2-Ethylhexyl)phthalate	CLP METALS Arsenic, Dissolved Beryllium, Dissolved Cadmium, Dissolved Chromium, Dissolved Chromium, Dissolved Copper, Dissolved	Lead, Dissolved Nickel, Dissolved Selentum, Dissolved Thallium, Dissolved Zinc, Dissolved	Total Petroleum Hydrocarbons

Appendix O: Surface Water Analytical Results Alpena CRTC, Alpena, MI

				_		
A-SW2 88	QUAL	S C		NO CA		
SPIA PC-TF4-SPIA-SW2 08/21/88	RESULT	0	11111	' 0 %		1 1
I-SW2 8	QUAL	N Q		용		
SP1 PC-TF4-SP1-SW2 08/14/88	RESULT	0	1 1 1 1 1 1	, 0	3	
SW1	QUAL	N Q	88		<b>B</b>	
SP1 PC-TF4-SP1-SW1 10/16/87	RESULT	0	0 0 3.20 3.9	0.10	110 0.10 1.90 0	80.0 -1
ws 7	QUAL	Š	O O	QN QN		
SW5 PC-MP2-SW5 10/22/87	RESULT	0	001111	t 0 %	8 ''''	
.W4 7	QUAL	Ä	ON ON	N Q		
SW4 PC-MP2-SW4 10/22/87	RESULT	0	0011116	n 0 (	1 1 1	
w1	QUAL	Ä	a a			
SW1 PC-MP2-SW1 10/22/87	RESULT	0	00	2.20	3	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	l/gu	Lgu Lgu Lgu Lgu Lgu Lgu		ign Lyn Lyn Lyn	ng.i
COLL		8010 Methyl chloride	CLF MEI ALS Chromium, Dissolved Copper, Dissolved Potassium Potassium, Dissolved Sodium Sodium Sodium, Dissolved 7700 Dissolved	Total Petroleum Hydrocarbons E160.1	E300.1 Chloride Fluoride Nitrate Nitrogen Nitrate Nitrogen	ortho-Phosphate

Appendix O: Surface Water Analytical Results Alpena CRTC, Alpena, MI

7-SW1 87	QUAL	Š	S S	身	
SP7 PC-TF4-SP7-SW1 10/19/87	RESULT	0	0011110	• • •	270 2.20 0 0 333 0
LSW2 18	QUAL	Š		Ş	
SP4 PC-TF4-SP4-SW2 08/22/88	RESULT	0		0	500
3-SW3	QUAL	Ä		Š	
SP3 PC-TF4-SP3-SW3 08/14/88	RESULT	0		0 6	1.00
SWI	QUAL	N Q	S S		8 8 8
SP3 PC-TF4-SP3-SW1 10/16/87	RESULT	0	0 0 - 0.54 - 1.20	0.20	388 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
-SW2	QUAL	ND		S S	
SP2 PC-TF4-SP2-SW2 08/14/88	RESULT	0		0	510
sw1	QUAL	Ä	Ą		8 8 8
SP2 PC-TF4-SP2-SW1 10/16/87	RESULT	0	0 6 - 0.67 - 1.30	0.20	432 0.60 0 0 0 0 0 0 0 0 0 0 0
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	l/gu	ugu ugu ligu ligu ligu ligu	l'Sm	
S.		8010 Methyl chloride	CLF MEI ALS Chromium, Dissolved Copper, Dissolved Potassium Potassium, Dissolved Sodium, Dissolved Tric, Dissolved	TPH Total Petroleum Hydrocarbons E160.1	Total Dissolved Solids E300.1 Chloride Fluoride Nitrate Nitrogen Nitrite Ntrogen Sulfate ortho-Phosphate
		<del>200</del> 0.00000	ಾ ಎಂಬರ್ ಎಲ್ ರಾಜನಾಗಿ ಬರುವಾಗಿ ಪ್ರದೇಶನೆಗಳು	(108	

Appendix O: Surface Water Analytical Results Alpena CRTC, Alpena, MI

W4	QUAL	Ð	25	2										
SW4 PC-TF4-SW4 10/16/87	RESULT	0	00	<b>,</b>		•	7	0.56	563	,	•	• .•	į	1
0-SW2	QUAL	<b>R</b>						Š						
SW10 PC-TF4-SW10-SW2 08/12/88	RESULT QUAL	0	•			•	•	0	230	1	1		1	•
w10 7	QUAL							Q.			Ω	N Q	9	Q.
SW10 PC-TF4-SW10 11/12/87	RESULT QUAL	5.80	10	0.52	4.40	1	S	0	240	23	0.	0	15	<b>&gt;</b>
-SW2 8	QUAL	N Q						QN						
SP8 PC-TF4-SP8-SW2 08/21/88	RESULT QUAL	0	•			٠	•	0	260	1	•		1	ı
	QUAL	Š	2	3				Ä			Š	Q.		Ž
SP8 PC-TF4-SP8-SW1 10/19/87	RESULT	0	00	> +		•	3	0	260	18	0	0.10	<b>24</b>	<b>&gt;</b>
-SW2 8	QUAL	N Q						QN Q						
SP7 PC-TF4-SP7-SW2 08/21/88	RESULT	0	•			•	ı	0	320	•	•		•	1
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	I/gu	l/gu	lygn T/gn	mg/I	mg/l	∏/gn	ng/l	Πgm	l/gm	mg/I	mg/l	mg/I	mgri
COLLECT			pa	,	Ą			drocarbons	ids					
		8010 Methyl chloride	CLP METALS Chromium, Dissolved	Potassium	Potassium, Diasolved Sodium	Sodium, Dissolved	Zinc, Dissolved	TPH Total Petroleum Hydrocarbons	E160.1 Total Dissolved Solids	E300.1 Chloride	Fluoride	Nitrite Nitrogen	Sulfate	ormo-rhospnate

Appendix O: Surface Water Analytical Results Alpena CRTC, Alpena, MI

	QUAL	QN Q	S S	Q.			88 8	
SW1 PC-LF6-SW1 10/15/87	RESULT	0	00'''	10	0.20	230	9 0.27 0 113 0	
-SW2 8	QUAL	8			Q.			
SW9 PC-TF4-SW9-SW2 08/12/88	RESULT	0	1 1 1 1 1		0	240	1 1 1 1 1 1	-
6 <i>x</i>	QUAL				Š		8 8 8 8	
SW9 PC-TF4-SW9 11/12/87	RESULT	4.70	10 8 0.55 -	14	0	240	24 0 1 16 0 0	
-SW2 8	QUAL	Š			Ä			
SW6 PC-TF4-SW6-SW2 08/16/88	RESULT	0		1 1	0	190	1 1 1 1 1	
w6 7	QUAL	N Q	N QN					
SW6 PC-TF4-SW6 10/16/87	RESULT	0	00 ' ' '	' m	0.20	413	1 1 1 1 1 1	
ws 7	QUAL	Š	88					
SW5 PC-TF4-SW5 10/16/87	RESULT	0	00 ' '	· FW	0.95	514	1.1.1.1.1.1	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	Кgu	Tgu I'gu I'gm I'gm	l/gm I/gu	arbons mg/l	l/gm	Lign Aga Lign Lign Lign	
03		8010 Methyl chloride	CLP METALS Chromium, Dissolved Copper, Dissolved Potassium Potassium, Dissolved	Sodium, Dissolved Zinc, Dissolved	TPH Total Petroleum Hydrocarbons	E160.1 Total Dissolved Solids	E300.1 Chloride Fluoride Nitrate Nitrogen Sulfate ortho-Phosphate	

Appendix O: Surface Water Analytical Results Alpena CRTC, Alpena, MI

w3 7	QUAL	N Q	Ö	S												Ω			Q.	
SW3 PC-LF6-SW3 10/15/87	RESULT	0	0	0	•	•	•	•	က		0.20	190		9.40	0.29	0	0.0	13	0	
7.2	QUAL	Z	Š	Ω					Š							2	S		N	
SW2 PC-LF6-SW2 10/15/87	RESULT	0	0	0		•	•	•	0		0.10	220		8.60	0.22	0	0	7.80	0	
LOCATOR: SAMPLE ID: COLLECTION DATE:	UNITS:	1/gn	f/Zn	l/gn	mg/l	mg/l	l/gm	mg/I	ug/l		mg/I	mg/I		#/gm	/Suu	mg/l	1/Bur	l/gm	mg/l	
S		8010 Methyl chloride	CLP METALS Chromium, Dissolved	Copper, Dissolved	Potassium	Potassium, Dissolved	Sodium	Sodium, Dissolved	Zinc, Dissolved	TPH	Total Petroleum Hydrocarbons	E160.1 Total Dissolved Solids	E300.1	Chloride	Fluoride	Nitrate Nitrogen	Nitrite Nitrogen	Sulfate	ortho-Phosphate	

1993 ABBREVIATED SI DATA

.. Data Summary Table; Soils Site 1 POL Storage Area

POIB010203         POIB010203D *         POIB020001           PC-01         PC-01         PC-01           SB01         SB02         SB02           2 to 3         2 to 3         0 to 1           Nov-13-92         Nov-13-92         Nov-13-92           CompuChem         CompuChem         CompuChem
PC-01 BB01 2 to 3 Nov-13-92 CompuChem
\$B01 2 to 3 Nov-13-92 CompuChem
2 to 3 Nov-13-92 CompuChem
Nov-13-92 CompuChem
CompuChem
EB-2 ,P-TB5 EB-2 ,P-TB5 EB-2 ,P-TB5
FB1, FB2 FB1, FB2 FB1, FB2
Result Q Result Q Result
2220 18.5
· n
7. U 27.
1.6 U 1.5
1. U
Ω
.92 U .86
Zn
.35 50 U 1.5
ы
五 7900 五
740 E 7800 E 1.6

ार्डक अस्तिकाल करें Data Summary Table : Soils Site 1 POL Storage Area

MIANG, Alpena CRTC, Alpena County Regional Airport, Alpena, Michigan

PC-010   PC-010   PC-010   PC-010		4		2030508104	
All	Sample Number:	P01B020305	FOTROSOTOS	Formación	
State	Sto	PC-01	PC-01	PC-01	
Alica	Locator:	SB02	SB03	SB03	
Nov-13-92   Nov-13-92   S to 7	Depth (ft);	3 to 5	1 to 3	5 to 7	
Compuchem   EB-2 , P-TB5   EB-2 ,	Date Sampled:	Nov-13-92	Nov-13-92	5 to 7	
EB-2 , P-TB5   EB-2 , P-TB5   EB-2 , P-TB5   EB-2   P-TB5	Laboratory	CompuChem	CompuChem	CompuChem	
FB1,FB2   FB1,FB2   FB1,FB2   Clean	- Contract	EB-2 , P-TB5	EB-2 , P-TB5	EB-2 , P-TB5	MDNR
Remult   Q   Rem	OC Samples	FB1, FB2	FB1, FB2	FB1, FB2	Cleanup
633 28.9 40.4  .99 U .23 J .69 UJ  .71 U .43 J .69 UJ  1.5 U .89 J .69 UJ  .99 U .89 UJ  1.5 U .89 UJ  .98 U .63 J .96 UJ  .98 U .64 J .96 UJ  .98 UJ  .99 UJ  .90 UJ			- 1	- 1	Levels*
533 28.9 40.4  .99 U .23 J .96 UJ  1.5 U .88 J .69 UJ  .88 U .63 J .69 UJ  .88 U .86 UJ  .88 U .86 UJ  .89 U .89 UJ  .81 UJ  .82 UJ  .85 UJ  .	ł				
1.5 U .23 J .69 UJ .69 UJ .71 U .43 J .69 UJ .69 UJ .69 UJ .71 U .43 J .69 UJ .69 UJ .72 UJ .69 UJ .75 UJ .76 UJ .77 UJ .		663	28 6	40.4	
1.5 U .43 J .69 UJ .63 J .71 U .63 J .71 U .63 J .72 UJ .63 J .73 UJ .88 U .64 J .85 UJ .72 U .73 UJ .73 UJ .74 J .74 UJ .75 UJ	TPH	e e e	n.	•	
99 U .23 J .96 UJ 71 U .43 J .69 UJ 1.5 U .8 J .69 UJ 1.5 UJ 1.8 U .63 J .96 UJ 1.8 U .64 J .85 UJ 1.8 U .64 J .85 UJ 1.9 UJ 1.5 UZ .6 1.9 UJ 1.9 UJ 1.14 J .2 U 1.9 UJ 1.9 UJ 1.9 UJ 1.14 J .17 U 1.6 U 1.9 UJ 1.9 UJ 1.9 UJ 1.17 U 1.6 UJ 1.9 UJ 1.9 UJ 1.17 U 1.6 UJ 1.9 UJ 1.9 UJ 1.17 U 1.6 UJ 1.9					
1.5 U43 J69 UJ 1.5 U8 J15 UJ 1.5 UJ 1.9 U95 J96 UJ 1.8 U63 J85 UJ 1.8 U64 J85 UJ 1.5 UJ 1.5 UZ6	1.1.1.2-Tetraphloroethane	-			7.0
1.5 U .8 J .1.5 UJ  .99 U .63 J .85 UJ  .88 U .64 J .85 UJ  .88 U .64 J .85 UJ  .85 UJ	1.2-Dichlorosthane				80
99 U95 J96 UJ .88 U63 J85 UJ .88 U64 J85 UJ .89 U64 J85 UJ .85 UJ .82 UJ 1.5 UZ .089 J2.6 1.9 UJ .14 J2 U1.9 UJ .14 J2 U1.9 UJ .66 J1.7 U1.6 UJ .66 J1.7 U1.6 UJ .1.6 UJ .1.7 U1.6 UJ .1.8 UJ .1.9 UJ	1 4 Dichlorobousone				20
.88 U63 J85 UJ .88 U64 J85 UJ .89 U64 J85 UJ .32 B3. U3 U3 UJ 1.5 UZ .089 J2 U9 UJ .31 J2 U9 UJ .14 J2 U9 UJ .66 J1.7 U6 UJ .66 J7 U9 UJ .66 J6 UJ .66 J6 Compound exceeds callbration range. [1 - Concentration is between the CRDL and the IDL.	The state of the s				1400
.32 B 1.3 U 1.3 UJ 1.5 UZ 2.6 1.9 UJ 1.14 J 2 U 1.9 UJ 2.0 1.9 UJ 1.14 J 2 U 1.9 UJ 2.0 1.9 UJ 2.0 1.9 UJ 1.9 UJ 1.0 UJ 1.15 UJ 2.0 1.9 UJ 1.0	Harris Carolina and Harris and Ha				14
1.3 UJ 1.5 UZ 2.6 1.9 UJ 1.6 U 1.9 UJ 1.14 J 2 U 1.9 UJ 1.9 UJ 1.9 UJ 1.14 J 2 U 1.9 UJ 1.9 UJ 1.9 UJ 1.6 UJ 2 U 1.9 UJ 1.6 UJ 1.7 U 1.6 UJ 1.7 U 1.6 UJ 1.6 UJ 1.7 U 1.7 U 1.6 UJ 1.7 U 1.7 U 1.8 UJ 1.9 UJ	Trichlorosthana				09
1.5 UZ 1.5 UZ 2.6 1.9 UJ 1.14 J 2 U 1.9 UJ 1.9 UJ 1.14 J 2 U 1.9 UJ 2 U 1.9 UJ 1.0 UJ 2 U 1.9 UJ 1.0					
32 B 1.3 U 1.3 UJ 1.5 UZ 2.6 1.9 UJ 1.9 UJ 31 J 2 U 1.9 UJ 1.14 J 2 U 1.9 UJ 1.9 UJ 1.6 J 1.7 U 1.9 UJ 1.6 UJ 1.6 UJ 1.7 U 1.6 UJ 1.6 UJ 1.6 UJ 1.7 U 1.6 UJ 1.6 UJ 1.7 U 1.6 UJ 1.6 UJ 1.7 U 1.6 UJ					
1.5 UZ  .089 J  .16 U  1.5 UJ  1.5 UJ  1.9 UJ  2 U  1.9 UJ  1.9 UJ  1.9 UJ  2 U  1.9 UJ  1.9 UJ  2 U  1.9 UJ  1.9 UJ  2 U  1.9 UJ  1.0 UJ  2 U  1.0 UJ  4etection level  2 Compound exceeds dallbration range.  Ind in the blank.  Z - Compound not confirmed on 8010 analyses.  [] - Concentration is between the CRDL and the IDL.	1,2-Dimethylbenzene				0009
.089 J 1.6 U 1.5 UJ .31 J 2 U 1.9 UJ .14 J 2 U 1.9 UJ .66 J 1.7 U 1.6 UJ detection level. E - Compound exceeds calibration range. and in the blank. Z - Compound not confirmed on 8010 analyses. [] - Concentration is between the CRDL and the IDL.	1.4-Dichlorobenzene		2.6		20
.31 J 2 U 1.9 UJ .14 J 2 U 1.9 UJ .66 J 1.7 U 1.6 UJ detection level. E - Compound exceeds calibration range. and in the blank. Z - Compound not confirmed on 8010 analyses. [] - Concentration is between the CRDL and the IDL.	Bonzeno				20
.14 J 2 U 1.9 UJ .66 J 1.7 U 1.6 UJ detection level. E - Compound exceeds calibration range.  Indin the blank. Z - Compound not confirmed on 8010 analyses.  [] - Concentration is between the CRDL and the IDL.	Chlorobenzeno		2 U		2000
detection level. E - Compound exceeds calibration range.  Indication level. Z - Compound not confirmed on 8010 analyses.  [] - Concentration is between the CRDL and the IDL.	Ethylbenzone		2 U		1400
detection level. E - C ind in the blank. Z - C	Styrene	.66 J			20
detection level. E - C ind in the blank. Z - C	** Act 307 Type B gleanup level	18			
Z - Z [] -	U - Non detect. Value listed i	is detection level.	1	dalibration range.	
Concentration is estimated.	B - Non detect. Compound was 1	found in the blank.	•	frmed on 8010 analyses.	
	J - Concentration is estimated	đ.	1	between the CRDL and the IDL.	